

# PMC-D40L

## SERVICE MANUAL

Ver 1.0 1999. 07

AEP Model  
UK Model  
E Model  
Australian Model

PMC-D40L is the Personal Component System.  
The mechanical and electrical specifications of PMC-D40L  
are almost same as PMC-D307L.  
So this manual contains only the points which differ from  
PMC-D307L service manual (9-924-943-11).

### • PARTS LIST

Page	PMC-D307L				PMC-D40L			
	Ref. No.	Part No.	Description	Remarks	Part No.	Description	Remarks	
58	* 2	A-3321-478-A	TUNER BOARD, COMPLETE (EXCEPT IT,EE)		* A-3322-099-A	TUNER BOARD, COMPLETE (IT)		
	* 2	A-3321-479-A	TUNER BOARD, COMPLETE (IT)		* A-3322-157-A	TUNER BOARD, COMPLETE (IT)		
	4	3-014-125-01	CABINET (REAR)		3-014-125-21	CABINET (REAR) (IT)		
	4	-----	-----		3-014-125-31	CABINET (REAR) (IT)		
	* 5	A-3321-480-A	AUDIO BOARD, COMPLETE		* A-3322-100-A	AUDIO BOARD, COMPLETE		
	6	3-014-127-01	CASE (LOWER)		3-014-127-11	CASE (LOWER)		
59	51	X-3373-799-1	LID (TERMINAL) ASSY		X-3377-837-1	LID (TERMINAL) ASSY		
	52	X-3376-075-2	LID ASSY, CASSETTE		X-3377-838-1	LID ASSY, CASSETTE		
	53	X-3376-074-1	PANEL ASSY, FRONT		X-3377-909-1	PANEL (FRONT) ASSY		
	54	3-014-091-01	BUTTON (MAIN)		3-014-091-21	BUTTON (MAIN)		
	55	3-014-090-01	CABINET (FRONT)		3-014-090-11	CABINET (FRONT)		
	56	3-014-092-01	BUTTON (UPPER)		3-014-092-11	BUTTON (UPPER)		
60	* 63	A-3321-474-A	LINE BOARD, COMPLETE		* A-3322-098-A	LINE BOARD, COMPLETE		
	65	3-014-096-01	HOLDER (CASSETTE)		3-014-096-11	HOLDER (CASSETTE)		
	* 101	A-3321-485-A	CD BOARD, COMPLETE		* A-3322-101-A	CD BOARD, COMPLETE		
	* 103	A-3321-484-A	CONTROL BOARD, COMPLETE (EXCEPT EE)		* A-3322-103-A	CONTROL BOARD, COMPLETE		
	106	3-014-123-01	CABINET (CD)		3-014-123-11	CABINET (CD)		
	108	3-351-377-11	DAMPER		3-922-112-31	DAMPER		
64	108	3-014-124-01	LID (CD)		3-014-124-11	LID (CD)		
	301	X-3376-076-1	SPEAKER (FRONT) SUB ASSY		X-3377-839-1	SPEAKER (FRONT) SUB ASSY		
	302	3-028-031-11	BOX, SPEAKER		3-028-031-21	BOX, SPEAKER (AEP)		
	302	-----	-----		3-028-031-31	BOX, SPEAKER (AEP)		
	△ T501	1-431-353-11	TRANSFORMER, POWER		△ 1-433-453-11	TRANSFORMER, POWER		
	351	X-3376-076-1	SPEAKER (FRONT) SUB ASSY		X-3377-839-1	SPEAKER (FRONT) SUB ASSY		
65	352	3-028-031-11	BOX, SPEAKER		3-028-031-21	BOX, SPEAKER (AEP)		
	352	-----	-----		3-028-031-31	BOX, SPEAKER (EXCEPT AEP)		
	356	3-028-030-11	PANEL (R), REAR		3-028-030-01	CHASSIS (R), REAR (AEP)		
	356	-----	-----		3-028-030-11	CHASSIS (R), REAR (EXCEPT AEP)		

- Abbreviation

IT : Italian model

CET : East European and Russian model

AUS : Australian model

SP : Singapore model

The components identified by mark △ or dotted line with mark △ are critical for safety.  
Replace only with part number specified.

## PERSONAL COMPONENT SYSTEM



MICROFILM

SONY®

MC-Service

• PARTS LIST

Page	PMC-D307L	PMC-D40L
66	ELECTRICAL PARTS LIST Ref. No. Part No. Description Remarks * A-3321-480-A AUDIO BOARD, COMPLETE	ELECTRICAL PARTS LIST Part No. Description Remarks * A-3322-100-A AUDIO BOARD, COMPLETE
69	* A-3321-485-A CD BOARD, COMPLETE	* A-3322-101-A CD BOARD, COMPLETE
70	* A-3321-484-A CONTROL BOARD, COMPLETE (EXCEPT EE)	* A-3322-103-A CONTROL BOARD, COMPLETE
73	* A-3321-474-A LINE BOARD, COMPLETE	* A-3322-098-A LINE BOARD, COMPLETE
75	* A-3321-478-A TUNER BOARD, COMPLETE (EXCEPT IT,EE) * A-3321-479-A TUNER BOARD, COMPLETE (IT)	* A-3322-099-A TUNER BOARD, COMPLETE (EXCEPT IT) A-3322-157-A TUNER BOARD, COMPLETE (IT)
77	MISCELLANEOUS ***** △T501 1-431-353-11 TRANSFORMER, POWER ACCESSORIES & PACKING MATERIALS ***** 3-860-142-11 MANUAL, INSTRUCTION (ENGLISH,GERMAN)(AEP,UK,SP,EE) 3-860-142-21 MANUAL, INSTRUCTION (FRENCH,SPANISH)(AEP,SP) 3-860-142-31 MANUAL, INSTRUCTION (DUTCH,SWEDISH,PORTUGUESE)(AEP) 3-860-142-41 MANUAL, INSTRUCTION (ITALIAN)(IT) 3-860-142-81 MANUAL, INSTRUCTION (POLISH,CZECH,HUNGARIAN)(CET) 3-860-142-91 MANUAL, INSTRUCTION (RUSSIAN)(EE) 3-864-758-11 MANUAL, INSTRUCTION (SWEDISH,FINNISH)(CET)	MISCELLANEOUS ***** △ 1-433-453-11 TRANSFORMER, POWER ACCESSORIES & PACKING MATERIALS ***** 3-867-143-11 MANUAL, INSTRUCTION (ENGLISH,GERMAN)(AEP,UK,AUS,SP) 3-867-143-21 MANUAL, INSTRUCTION (FRENCH,SPANISH)(AEP,SP) 3-867-143-31 MANUAL, INSTRUCTION (DUTCH,SWEDISH,SPANISH)(AEP) 3-867-143-41 MANUAL, INSTRUCTION (ITALIAN)(IT) 3-867-143-51 MANUAL, INSTRUCTION (POLISH,CZECH,HUNGARIAN)(CET) 3-867-143-61 MANUAL, INSTRUCTION (SWEDISH,FINNISH)(CET)

The components identified by mark △ or dotted line with mark △ are critical for safety.  
Replace only with part number specified.

# PMC-D307L

## SERVICE MANUAL

Ver 1.0 1998. 07

*AEP Model  
UK Model  
Singapore Model*



CD Section	Model Name Using Similar Mechanism	PMC-D305L
	CD Mechanism Type	KSM-213CDM
	Optical Pick-up Name	KSS-213C
Tape Section	Model Name Using Similar Mechanism	NEW
	Tape Transport Mechanism Type	MF-D307

## SPECIFICATIONS

### CD player section

#### System

Compact disc digital audio system

#### Laser diode properties

Material: GaAlAs

Wave length: 780 nm

Emission duration: Continuous

Laser output: Less than 44.6 μW

(This output is the value measured at a distance of about 200 mm from the objective lens surface on the optical pick-up block with 7 mm aperture.)

#### Spindle speed

200 r/min (rpm) to 500 r/min (rpm) (CLV)

#### Number of channels

2

#### Frequency response

20 - 20,000 Hz +1/-2.5 dB

#### Wow and flutter

Below measurable limit

### Radio section

#### Frequency range

FM	Except Italian, East European model	87.6 - 107 MHz
	Italian model	87.5 - 108 MHz
	East European model	65 - 74 MHz
		87.5 - 108 MHz
MW		531 - 1,602 kHz
LW		153 - 279 kHz

#### IF

FM: 10.7 MHz

MW/LW: 450 kHz

#### Aerials

FM: External aerial terminal

MW/LW: External aerial terminal

### Cassette-corder section

#### Recording system

4-track 2-channel stereo

#### Fast winding time

Approx. 130 s (sec.) with Sony cassette C-60

#### Frequency response

TYPE I (normal): 40 - 15,000 Hz

### General

#### Speaker

Full range: 8 cm (3 1/4 in.) dia., 6.0 ohms,  
cone type × 2

#### Input

LINE IN jack (stereo minijack)  
Minimum input level 250 mV

#### Outputs

Headphones jack (stereo minijack)  
For 16 - 68 ohms impedance headphones  
LINE OUT jack (stereo minijack)  
Rated output level 440 mV at load impedance  
47 kilohms  
Optical digital output (optical output connector)  
Wave length: 630 - 690 nm

#### Maximum power output

10 W + 10 W

#### Power requirements

For personal component system:  
230 V AC, 50 Hz

For remote commander:

3 V DC, 2 R6 (size AA) batteries

- Continued on next page -

## PERSONAL COMPONENT SYSTEM

**SONY®**

*MC-Service*



MICROFILM

Power consumption  
 AC 35 W  
 Dimensions (incl. projecting parts)  
 Player: approx. 130 × 211 × 200 mm (w/h/d)  
 (5 1/8 × 8 3/8 × 7 7/8 inches)  
 Left speaker: approx. 130 × 210 × 235 mm  
 (w/h/d) (5 1/8 × 8 3/8 × 9 3/8 inches)  
 Right speaker: approx. 130 × 211 × 200 mm  
 (w/h/d) (5 1/8 × 8 3/8 × 7 7/8 inches)  
 Mass  
 Player: approx. 1.7 kg (3 lb. 12 oz.)  
 Left speaker: approx. 3.2 kg (7 lb. 1 oz.)  
 Right speaker: approx. 1.6 kg (3 lb. 9 oz.)  
 Supplied accessories  
 Remote commander (RMT-C305AD) (1)  
 FM lead aerial (1)  
 MW/LW loop aerial (1)  
 Audio connecting cord (1)

Design and specifications are subject to change without notice.

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### SAFETY-RELATED COMPONENT WARNING!!

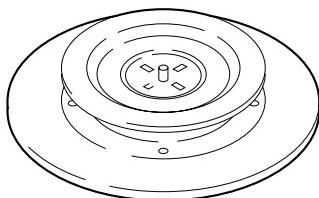
COMPONENTS IDENTIFIED BY MARK ▲ OR DOTTED LINE WITH MARK ▲ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

## SECTION 1 SERVICING NOTES

### CHUCK PLATE JIG ON REPAIRING

On repairing CD section, playing a disc without the lid (CD), use Chuck Plate Jig.

- Code number of Chuck Plate Jig: X-4918-255-1



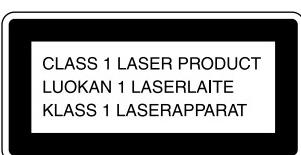
### NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic breakdown because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body. During repair, pay attention to electrostatic breakdown and also use the procedure in the printed matter which is included in the repair parts.

The flexible board is easily damaged and should be handled with care.

### NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.



This Compact Disc player is classified as a CLASS 1 LASER product.

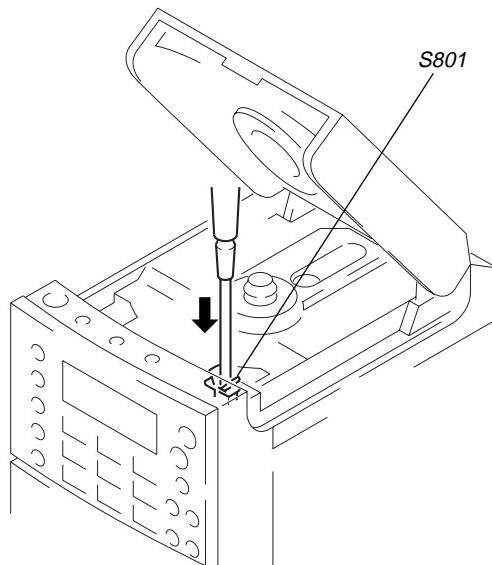
The CLASS 1 LASER PRODUCT table is location on the rear exterior.

### CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

### LASER DIODE AND FOCUS SEARCH OPERATION CHECK

1. Turn POWER switch on with to disc inserted and press FUNCTION button to CD position.
2. Open the lid (CD).
3. Turn on S801 as following figure.
4. Press the ► (CD) button.
5. Confirm the laser diode emission while observing the objective lens. When there is no emission, Auto Power Control circuit or Optical Pick-up is broken.  
Objective lens moves up and down three times for focus search.



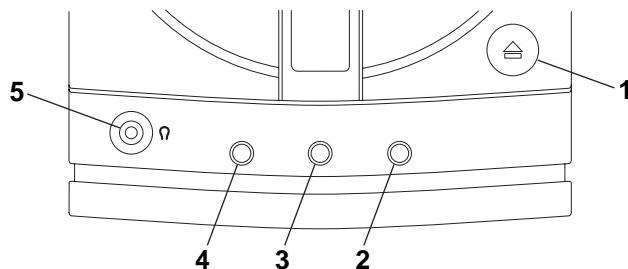
### HOW TO CHANGE THE FM CERAMIC FILTERS

This model is used three ceramic filters of CF1, 2 and CF3. Therefore, the ceramic filters must change three pieces together since it's supply three pieces in one package as a spare parts.

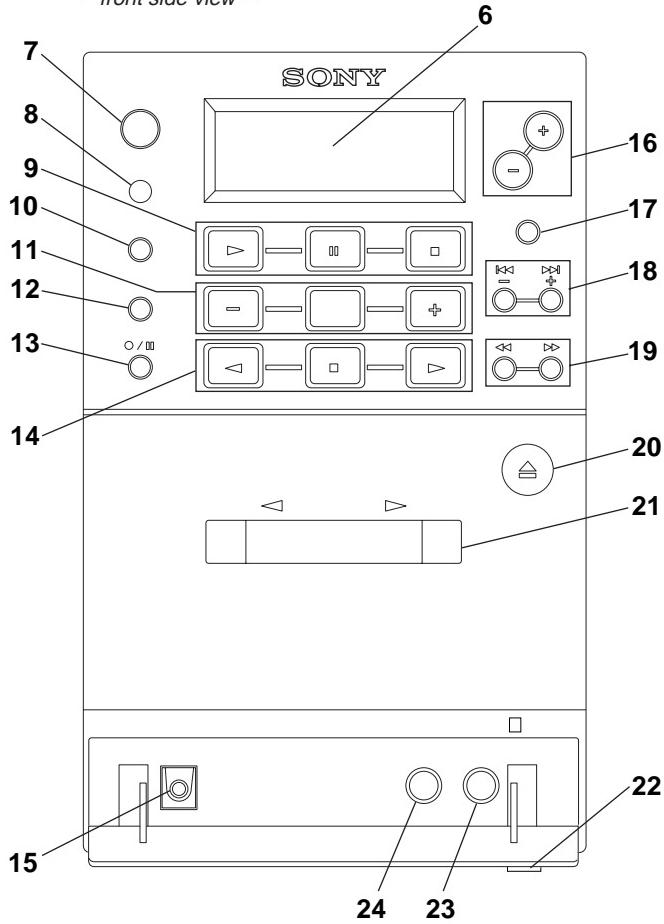
## SECTION 2 GENERAL

### 2-1. LOCATION OF CONTROLS

- upper side view -



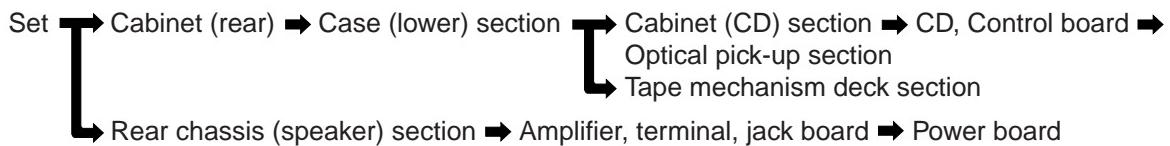
- front side view -



- |  |  |
|--|--|
| <p>1. ▲ OPEN/CLOSE (CD) button<br/>         2. PLAY MODE MONO/ST/ISS button<br/>         3. PGM SET/AUTO PRESET button<br/>         4. SOUND button<br/>         5. Ω (Headphones) jack<br/>         6. Display window<br/>         7. OPERATE (power) button<br/>         8. Remote sensor window<br/>         9. CD operation buttons<br/>           ▶ (Play) button<br/>           ■ (Pause) button<br/>           ■ (Stop) button<br/>         10. FUNCTION button<br/>         11. RADIO operation buttons<br/>           PRESET – button<br/>           BAND button<br/>           PRESET + button</p> | <p>12. DIR MODE button<br/>         13. ●/■ (Recording/pause) button<br/>         14. TAPE operation buttons<br/>           ◀ (Reverse) button<br/>           ■ (Stop) button<br/>           ▶ (Play) button<br/>         15. OPTICAL DIGITAL OUT (CD) jack<br/>         16. VOLUME +/- button<br/>         17. DISPLAY/ENTER button<br/>         18. ▲▲/▶▶, TUNE +/- button<br/>         19. &lt;--&gt; button<br/>         20. ▲ PUSH (cassette holder open) button<br/>         21. Cassette holder<br/>         22. OPEN ▼ knob<br/>         23. LINE OUT jack<br/>         24. LINE IN jack</p> |
|--|--|

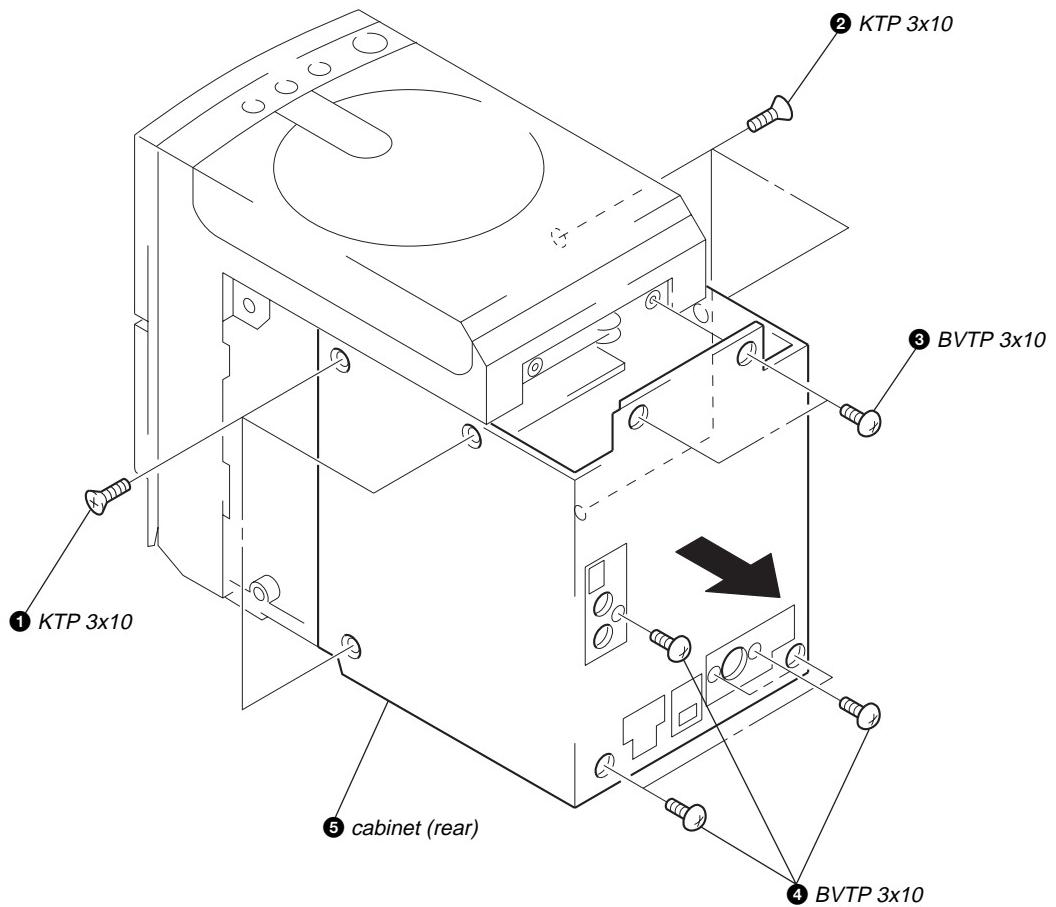
## SECTION 3 DISASSEMBLY

- The equipment can be removed using the following procedure.

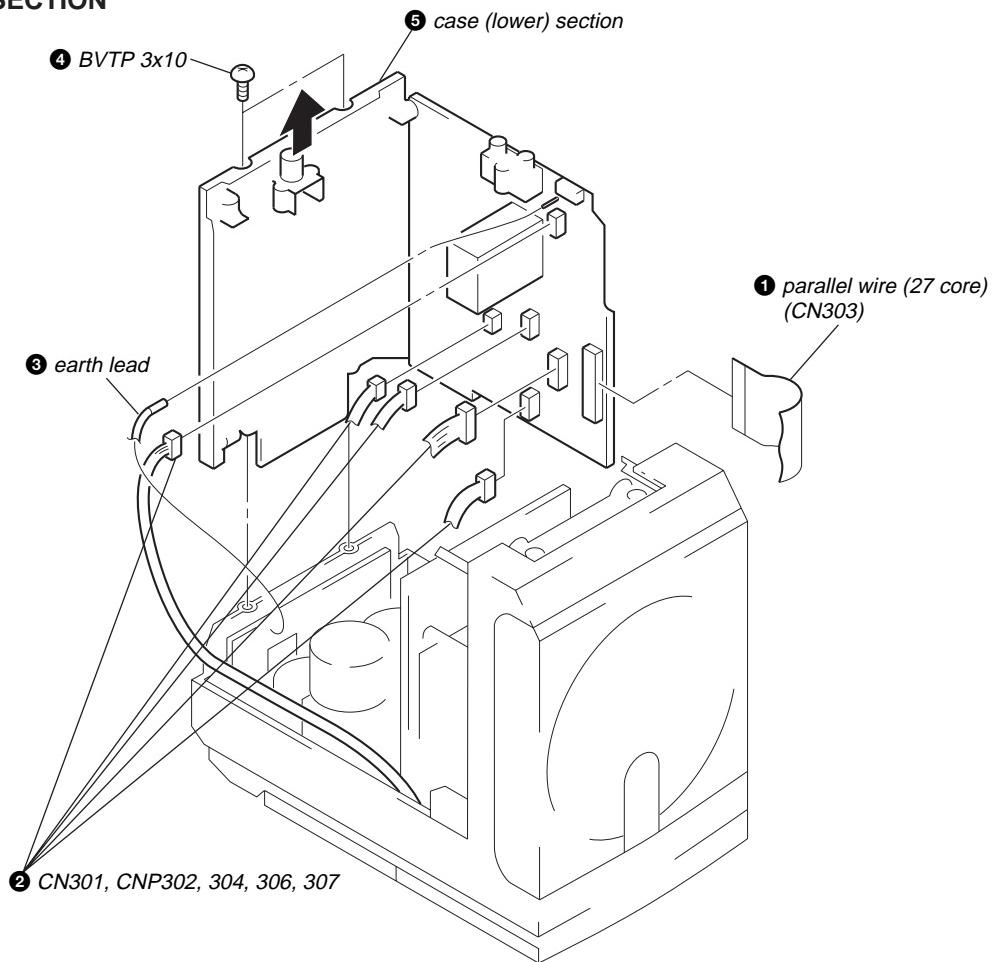


**Note :** Follow the disassembly procedure in the numerical order given.

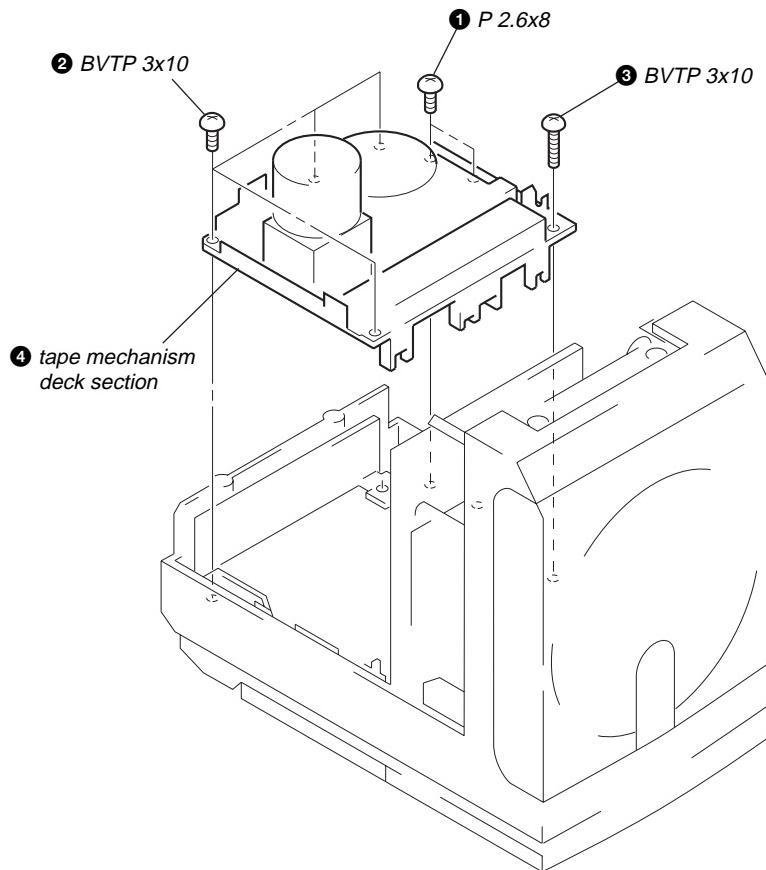
### 3-1. CABINET (REAR)



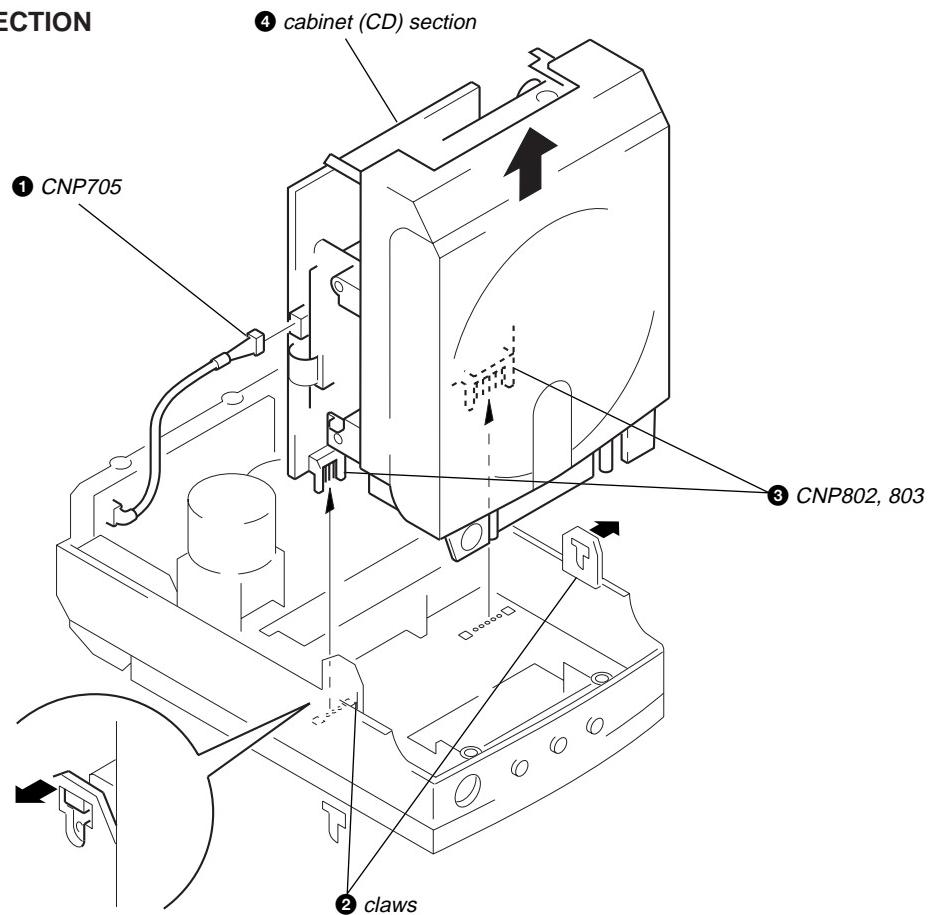
### 3-2. CASE (LOWER) SECTION



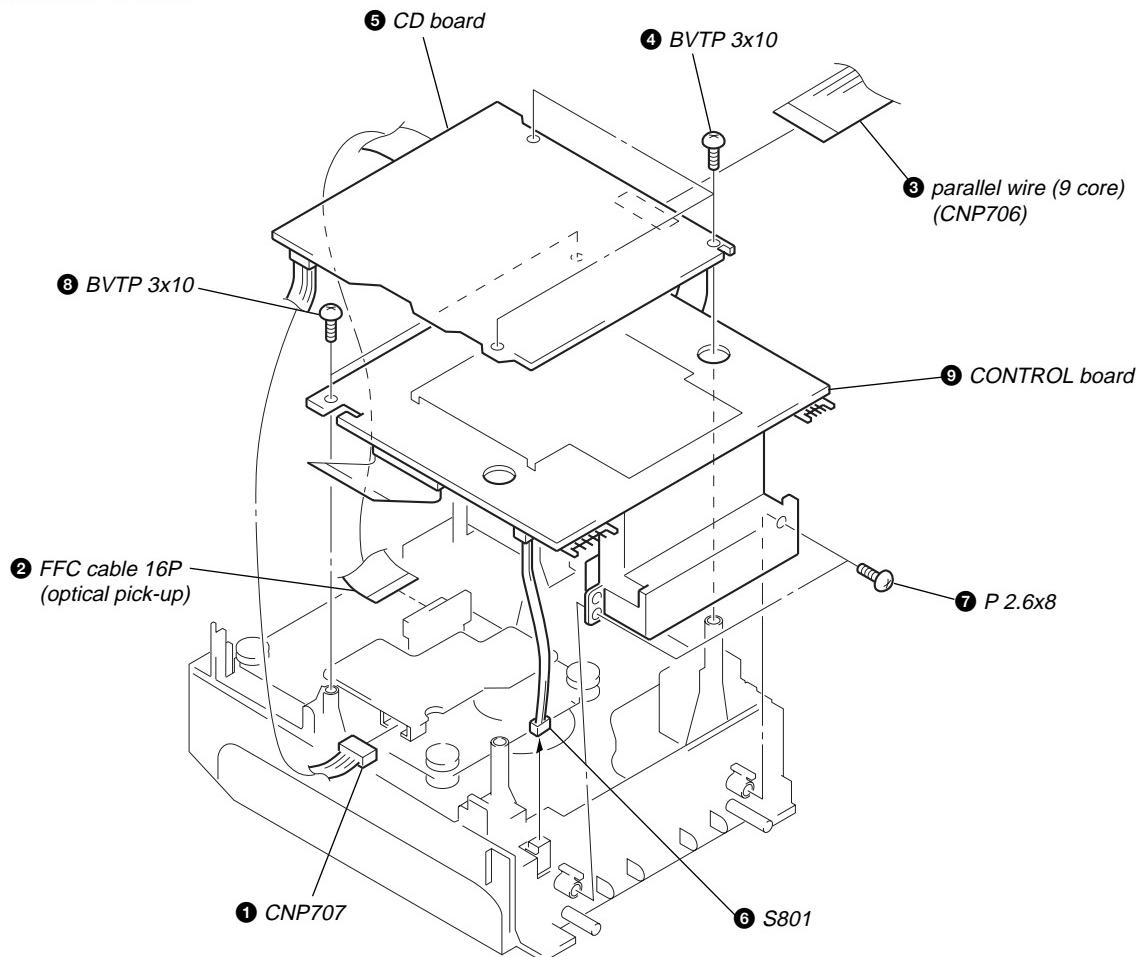
### 3-3. TAPE MECHANISM DECK SECTION



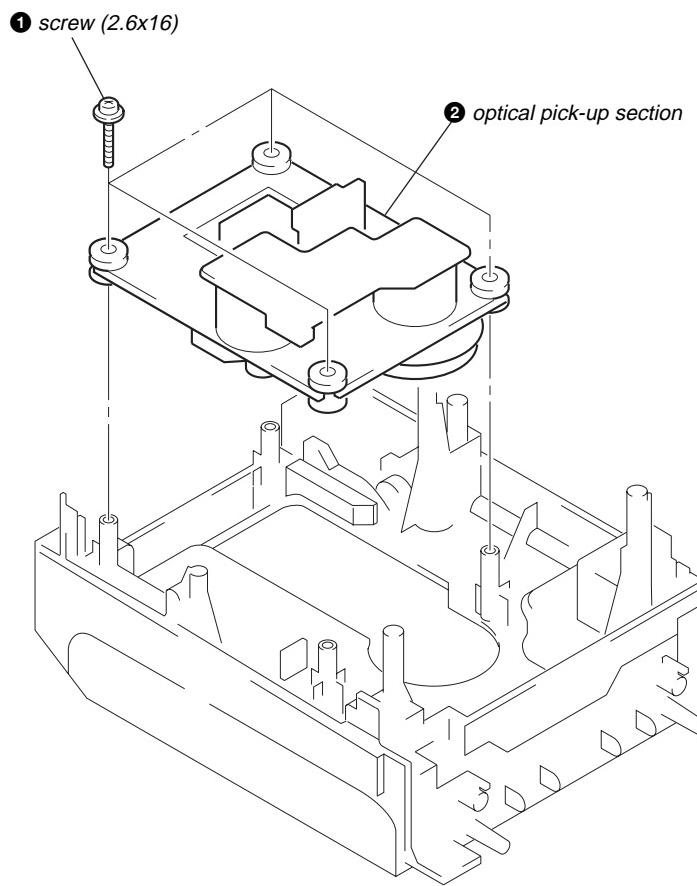
### 3-4. CABINET (CD) SECTION



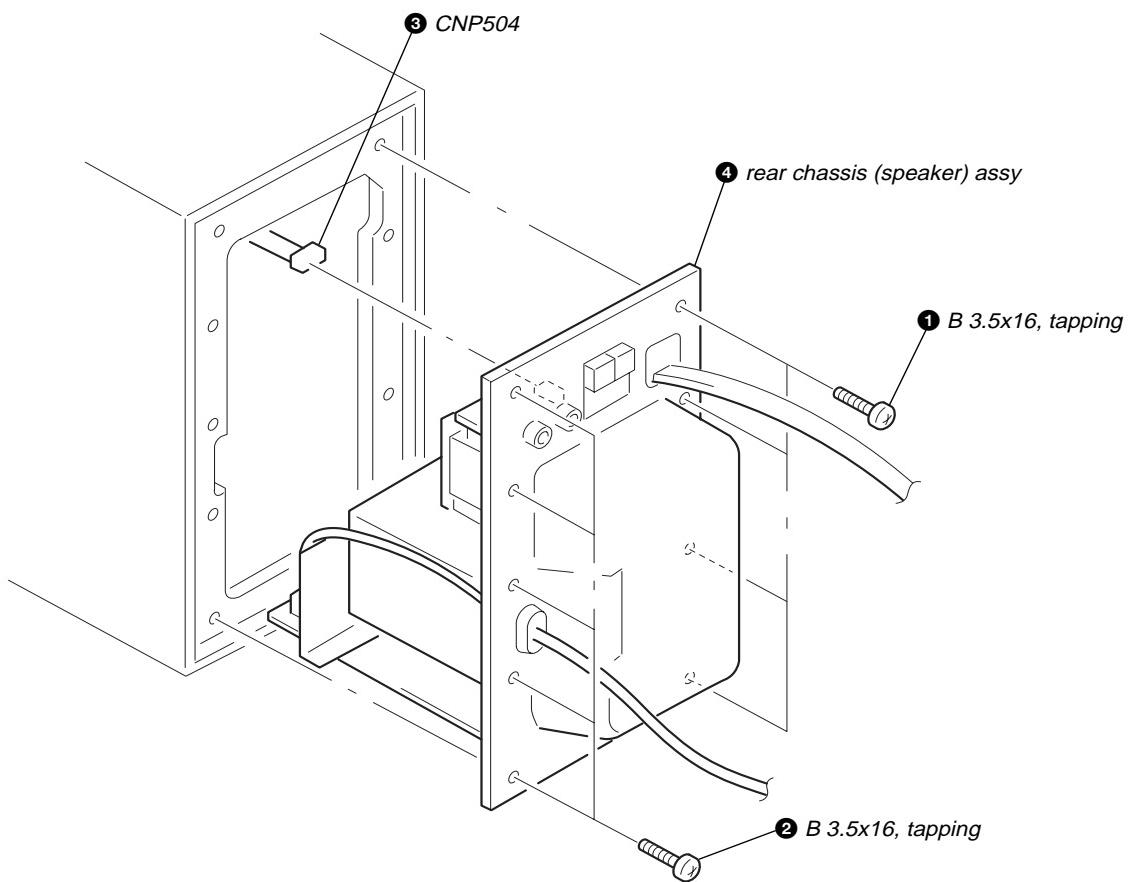
### 3-5. CD, CONTROL BOARD



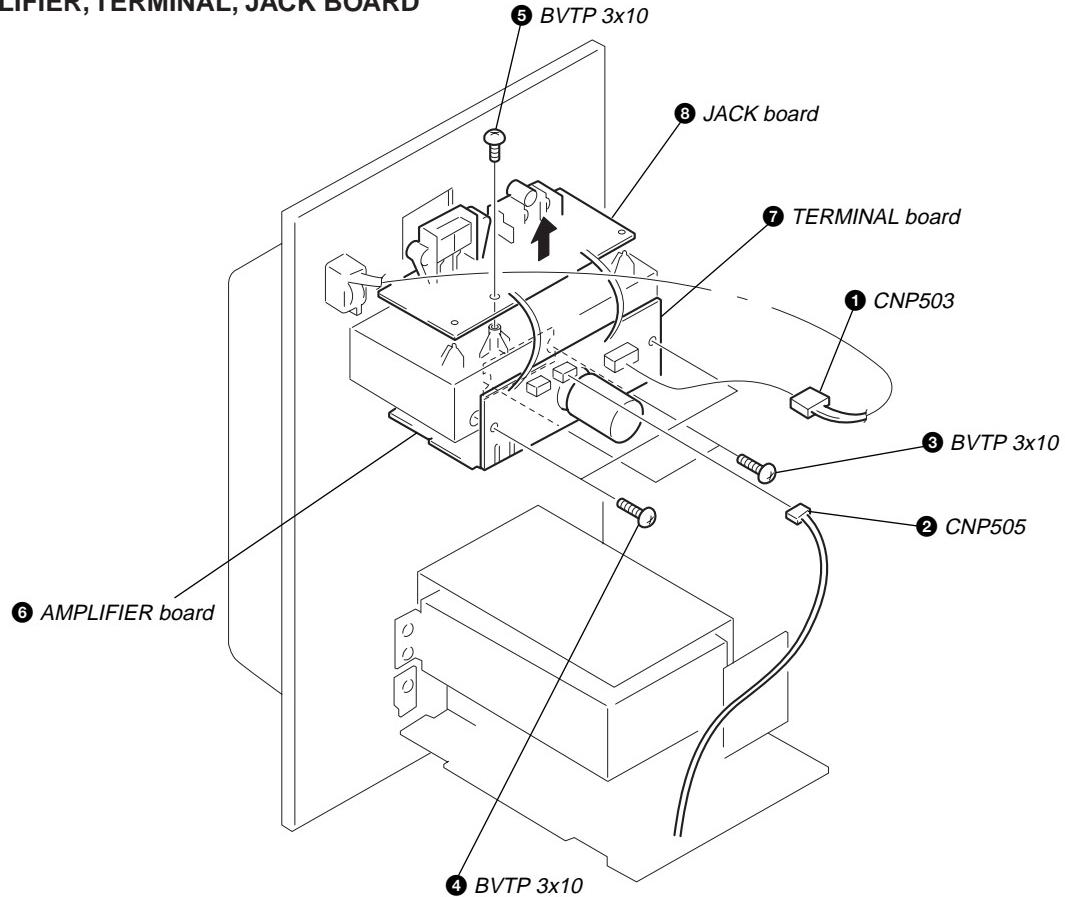
### 3-6. OPTICAL PICK-UP SECTION



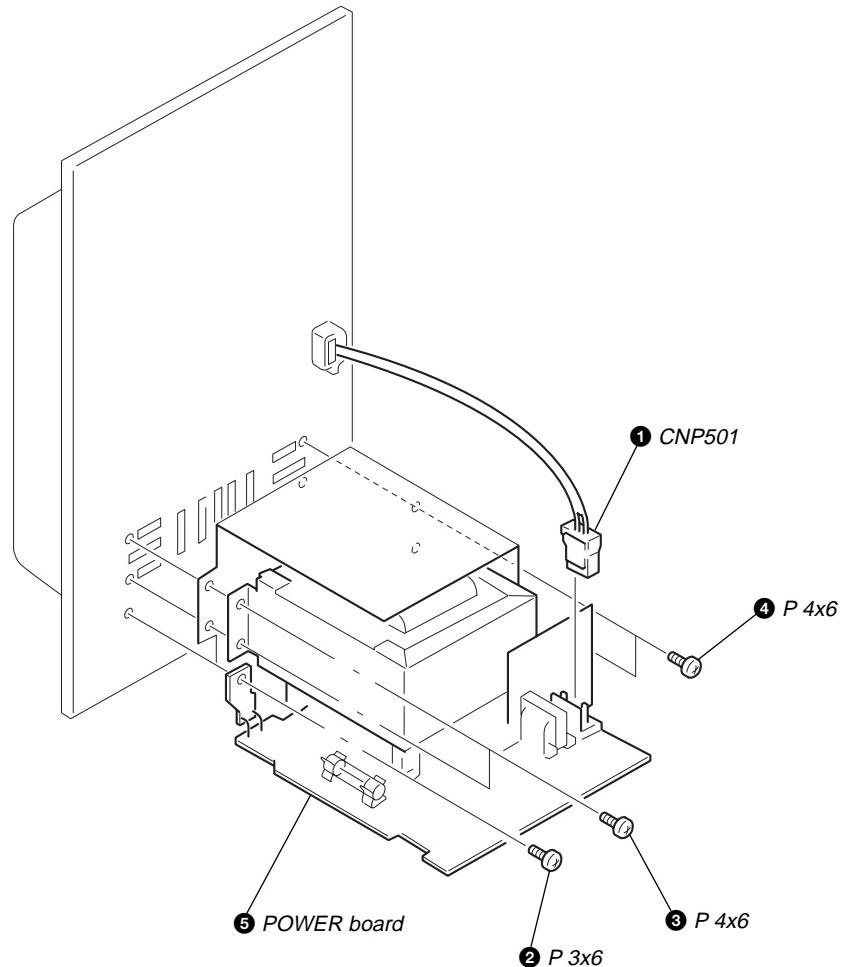
### 3-7. REAR CHASSIS (SPEAKER) SECTION



### 3-8. AMPLIFIER, TERMINAL, JACK BOARD



### 3-9. POWER BOARD



## SECTION 4 MECHANICAL ADJUSTMENTS

### PRECAUTION

- Clean the following parts with a denatured-alcohol-moistened swab:
 

record/playback/erase head	pinch roller
rubber belts	capstan
idle	
- Demagnetize the record/playback/erase head with a head demagnetizer. (Do not bring the head demagnetizer close to the erase head.)
- Do not use a magnetized screwdriver for the adjustments.
- After the adjustments, apply suitable locking compound to the parts adjusted.
- The adjustments should be performed with the rated power supply voltage unless otherwise noted.

### Torque Measurement

Mode	Torque Meter	Meter Reading
FWD	CQ-102C	30 – 70 g•cm (0.42 – 1.02 oz•inch)
FWD Back tension		2.0 – 6.0 g•cm (0.028 – 0.076 oz•inch)
REV	CQ-102RC	30 – 70 g•cm (0.42 – 1.02 oz•inch)
REV Back tension		2.0 – 6.0 g•cm (0.028 – 0.076 oz•inch)
FF, REW	CQ-201B	80 – 170 g•cm (1.12 – 2.38 oz•inch)

### Tape Tension Measurement

Mode	Tension Meter	Meter Reading
FWD	CQ-403A	more than 90 g (more than 3.17 oz)
REV	CQ-403R	

## SECTION 5 ELECTRICAL ADJUSTMENTS

### TAPE SECTION 0 dB = 0.775 V

- The adjustments should be performed in the order given in the service manual. (As a general rule. Playback circuit adjustment should be completed before performing recording circuit adjustment.)
- The adjustments should be performed for both L-ch and R-ch unless otherwise indicated.

### Standard Output Level

	SP OUT	PHONES
Load impedance	6 Ω	32 Ω
Output level	0.775 V (0 dB)	0.25 V (-10 dB)

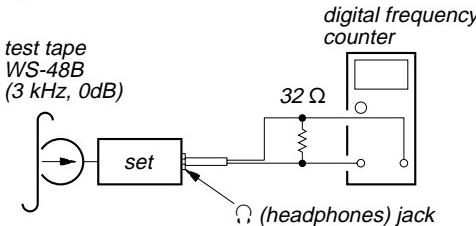
### Test Tape

Type	Signal	Used for
WS-48B	3 kHz, 0 dB	Tape speed adjustment
P-4-A063	6.3 kHz, -10 dB	Head azimuth adjustment

### Tape Speed Adjustment

#### Procedure:

Mode: playback

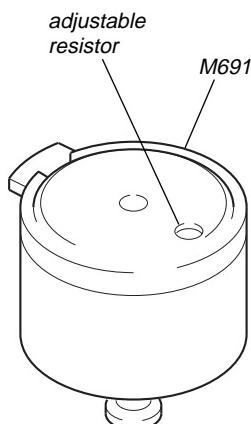


#### Adjustment Values:

Digital frequency counter
2,970 to 3,030 Hz

Frequency difference between the beginning and the end of the tape should be within 1% (30 Hz).

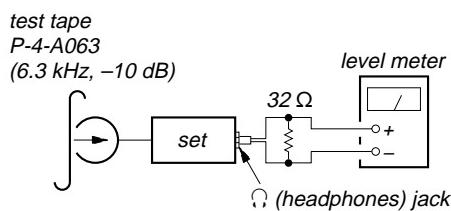
#### Adjustment Location:



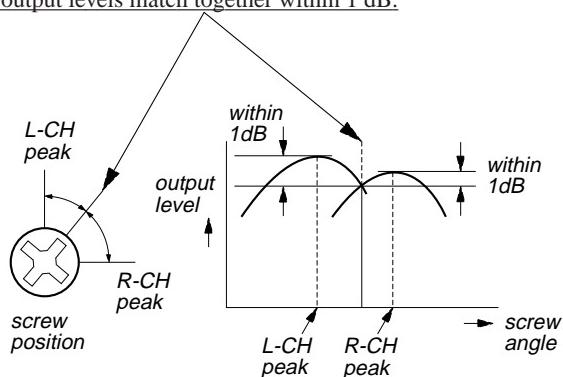
## Record/Playback Head Azimuth Adjustment

### Procedure:

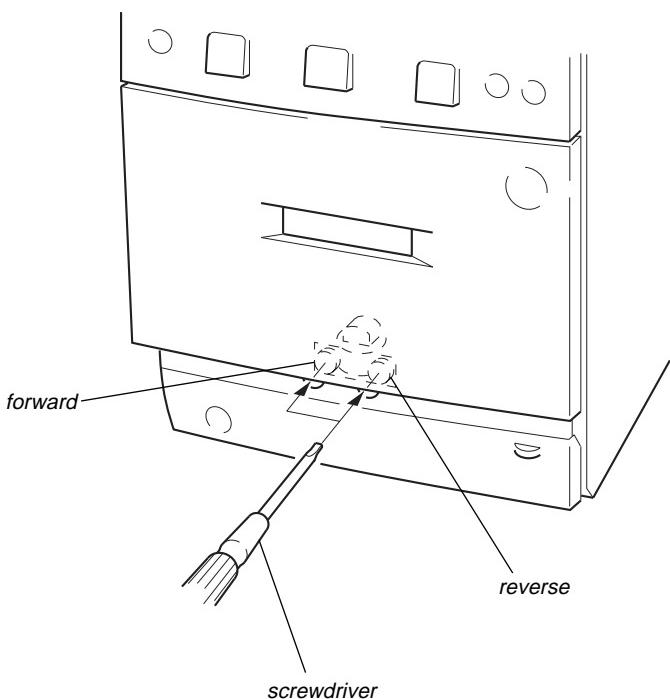
1. Mode: playback



2. Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw until both of output levels match together within 1 dB.

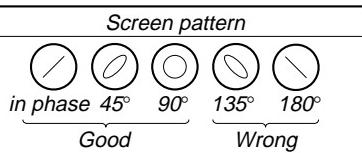
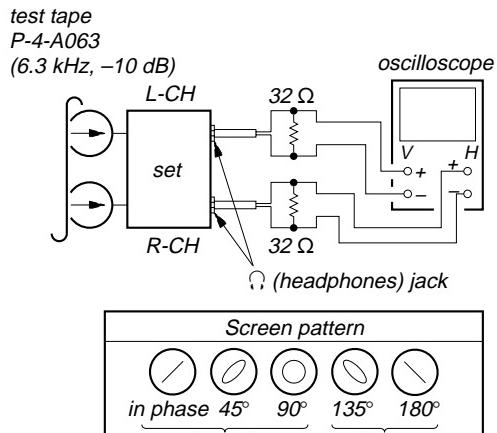


### Adjustment Location:



3. Phase Check

Mode: playback



4. After the adjustment, lock the screws with locking compound.

## TUNER SECTION 0 dB = 1 $\mu$ V

### Precautions in Repairing

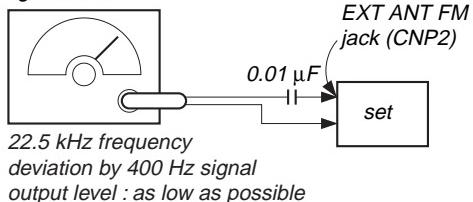
Note : As a tuner unit (TU1) is difficult to repair if faulty, replace it with new one.

### • FM Section

#### Setting:

FUNCTION button: FM

#### FM RF signal generator

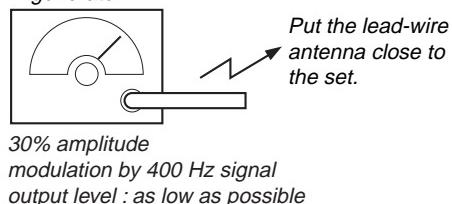


### • MW/LW Section

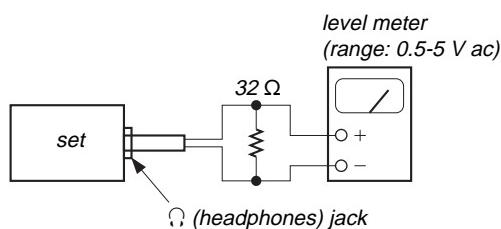
#### Setting:

FUNCTION button: MW or LW

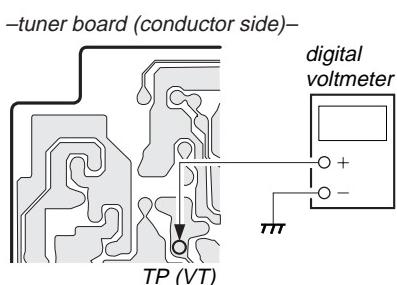
#### AM RF signal generator



### • Connecting Level Meter (FM, MW and LW)



### • Connecting Digital Voltmeter (FM, MW and LW)



- Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.

## FM FREQUENCY COVERAGE ADJUSTMENT

Frequency Display	87.5 MHz (65 MHz)	108 MHz
Reading on Digital voltmeter	1.3 V or more (1.0 V or more)	9.0 V or less (10.0 V or less)
Adjustment Part	<confirmation>	<confirmation>

## FM TRACKING ADJUSTMENT

Adjust for a maximum reading on level meter.

<confirmation> <confirmation>

87.5 MHz (68 MHz) 108 MHz (102 MHz)

## MW FREQUENCY COVERAGE ADJUSTMENT

Frequency Display	531 kHz	1,611 kHz
Reading on Digital voltmeter	$0.85 \pm 0.5$ V	$6.8 \pm 1.5$ V
Adjustment Part	<confirmation>	<confirmation>

## MW TRACKING ADJUSTMENT

Adjust for a maximum reading on level meter.

L3 CT4

621 kHz 1,404 kHz

## AM IF ADJUSTMENT

Adjust for a maximum reading on level meter.

CFT1

450 kHz

## LW FREQUENCY COVERAGE ADJUSTMENT

Frequency Display	153 kHz	279 kHz
Reading on Digital voltmeter	$0.6 \pm 0.4$ V	$7.5 \pm 0.5$ V
Adjustment Part	<confirmation>	L4

## LW TRACKING ADJUSTMENT

Adjust for a maximum reading on level meter.

L5 CT5

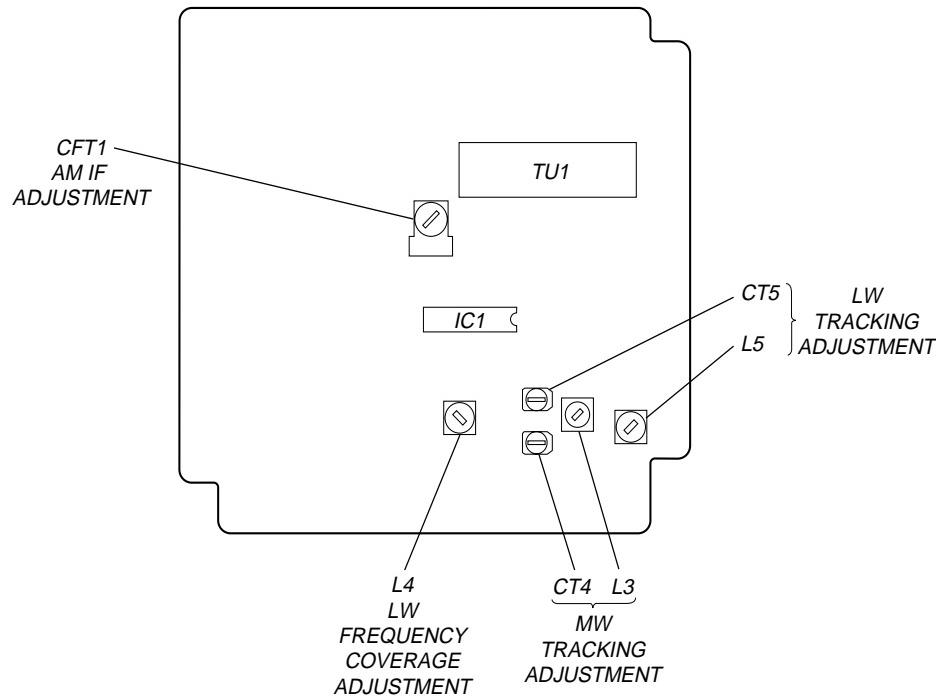
162 kHz 261 kHz

( ) : East European model

**Adjustment Location:** TUNER board (See page 13.)

**Adjustment Location:**

—tuner board (component side)—



## CD SECTION

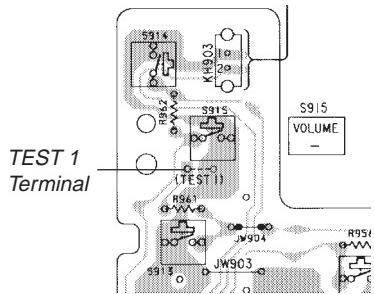
### Notes on Adjustment

1. Perform adjustment in test mode.  
After adjustments, be sure to release test mode.
2. Perform adjustments in the order given.
3. Use the disc (YEDS-18. Part No. 3-702-101-01) only when so indicated.

### How to Put the Set into Test Mode

1. Disconnect an AC plug cord. (Power is not applied to the set.)
2. Solder across the TEST1 terminal.
3. Close the lid (CD).
4. Connect an AC plug cord.

### [SW (A) BOARD] (Conductor Side)



### How to Release the Test Mode

1. Be sure to disconnect the AC plug cord and remove the solder bridge at the TEST1 terminal connected before in setting.
2. The set thus becomes available for normal operation

### Before Beginning Adjustment

Put the set into test mode and perform the following checks.  
Repair if there are any problems.

#### • Sled Motor Check

Press the  $\blacktriangleright\blacktriangleright$ ,  $\blacktriangleleft\blacktriangleleft$  buttons and confirm that the optical pick-up moves smoothly from the innermost to outermost circumference and back smoothly and with no catching or abnormal noises.

$\blacktriangleright\blacktriangleright$  : Optical pick-up moves to the outer circumference

$\blacktriangleleft\blacktriangleleft$  : Optical pick-up moves to the inner circumference

#### • Focus Search Check

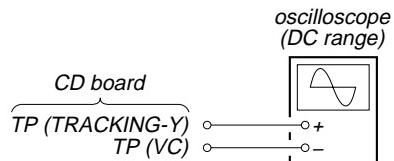
1. Press the  $\blacktriangleright$  button. (Focus search operation is performed continuously.)
2. Look at the optical pick-up objective lens and confirm that it moves up and down smoothly, when no catching or abnormal noises.
3. Press the  $\blacksquare$  button.  
Confirm that focus search operation stops. If it does not, press the  $\blacksquare$  button again longer.

**Note:** When the malfunction is occurred by mis-passing other keys, turn off the power and check again from making the test mode.

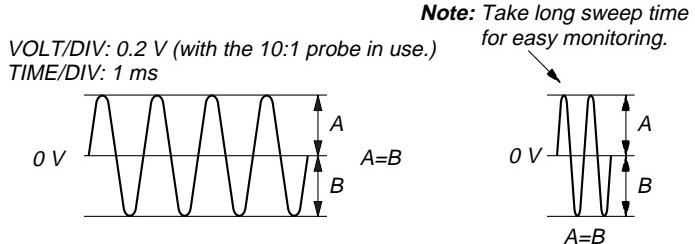
### E-F Balance Adjustment

This adjustment is to be done when the optical pick-up is replaced.

#### Procedure:



1. Connect the oscilloscope to TP (TRACKING-Y) and TP (VC) on the CD board.
2. Insert the disc (YEDS-18) in and close the lid (CD).
3. Put the set into test mode.
4. Press the  $\blacktriangleright\blacktriangleright$  and  $\blacktriangleleft\blacktriangleleft$  buttons to move the optical pick-up to the center.
5. Press the  $\blacktriangleright$  button.  
From focus searching, focus is turned ON while entering CLV drawing-in mode. Tracking and sled are turned OFF.
6. Adjust RV703 so that the oscilloscope traverse waveform is symmetrical, as shown in the figure below.



**Adjustment value:**  $0.4 \pm 0.2$  Vp-p (A + B)

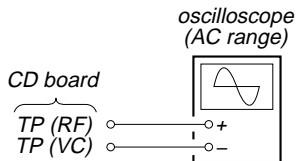
7. Release the test mode after adjustment is completed.

**Adjustment Location:** CD board (See page 17.)

## Focus Bias Adjustment

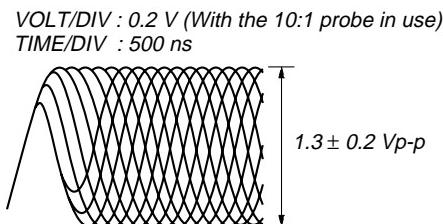
This adjustment is to be done when the optical pick-up is replaced.

### Procedure:



1. Connect the oscilloscope TP (RF) and TP (VC) on the CD board.
2. Insert the disc (YEDS-18) in and close the lid for CD.
3. Put the set into test mode. (See page 14.)
4. Press  $\blacktriangleright\blacktriangleright$  and  $\blacktriangleleft\blacktriangleleft$  buttons to move the optical pick-up to the center. (Move the optical pick-up to the music area on the disc to enable easy visibility of the eye pattern.)
5. Press the  $\blacktriangleright$  button.  
[From focus searching, focus is turned ON while entering CLV drawing-in mode. Tracking and sled are turned OFF.]
6. Press the  $\blacktriangleright$  button.  
[Both tracking and sled are turned ON.]
7. Adjust RV701 so that the oscilloscope waveform is as shown in the figure below. (eye pattern)  
A good eye pattern means that the diamond shape ( $\approx$ ) in the center of the waveform can be clearly distinguished.

#### • RF signal reference waveform (eye pattern)



*When observing the eye pattern, set the oscilloscope for AC range and raise vertical sensitivity.*

8. Release the test mode after adjustment is completed.

**Adjustment Location:** CD board (See page 17.)

## REFERENCE

### Focus/Tracking Gain Adjustment

A frequency response analyzer is necessary in order to perform this adjustment exactly.

However, this gain has a margin, so even if it is slightly off, there is no problem. Therefore, do not perform this adjustment.

Focus/tracking gain determines the pick-up follow-up (vertical and horizontal) relative to mechanical noise and mechanical shock when the 2-axis device operate.

However, as these reciprocate, the adjustment is at the point where both are satisfied.

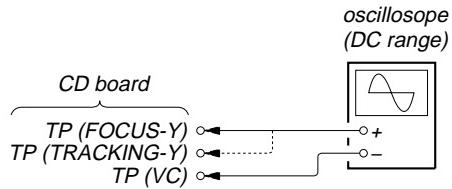
- When gain is raised, the noise when the 2-axis device operates increases.
- When gain is lowered, mechanical shock and skipping occurs more easily.
- When gain adjustment is off, the symptoms below appear.

Symptoms	Gain	Focus	Tracking
<ul style="list-style-type: none"> <li>• The time until music starts becomes longer for <math>\blacksquare \rightarrow \blacktriangleright</math> on automatic selection. (<math>\blacktriangleleft\blacktriangleleft</math>, <math>\blacktriangleright\blacktriangleright</math> buttons pressed.) (Normally takes about 2 seconds.)</li> </ul>	low	low or high	
<ul style="list-style-type: none"> <li>• Music does not start and disc continues to rotate for <math>\blacksquare \rightarrow \blacktriangleright</math> or automatic selection. (<math>\blacktriangleleft\blacktriangleleft</math>, <math>\blacktriangleright\blacktriangleright</math> buttons pressed.)</li> </ul>	—	low	
<ul style="list-style-type: none"> <li>• Sound is interrupted during PLAY. Or time counter display stops progressing.</li> </ul>	—	low	
<ul style="list-style-type: none"> <li>• More noise during 2-axis device operation.</li> </ul>	high	high	

The following is a simple adjustment method.

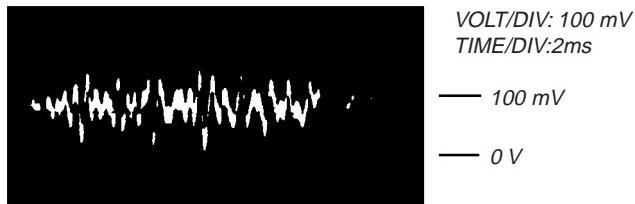
### - Simple Adjustment -

**Note:** Since exact adjustment cannot be performed, remember the positions of the controls before performing the adjustment. If the positions after the primary adjustment are only a little different, return the controls to the original position.

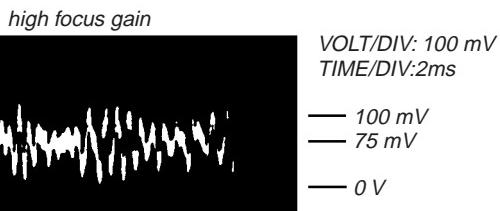
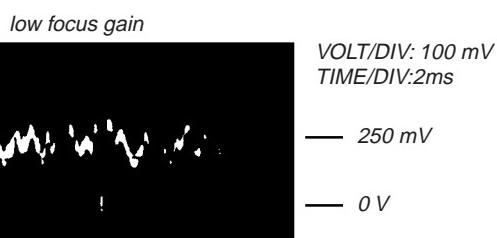


### Procedure:

1. Keep the set horizontal.  
If the set is not horizontal, this adjustment cannot be performed due to the gravity against the 2-axis device.
2. Connect the oscilloscope TP (FOCUS-Y) and TP (VC) on the CD board.
3. Insert the disc (YEDS-18) in and close the lid for CD.
4. Put the set into test mode. (See page 14.)
5. Press the ► button.  
[From focus searching, focus is turned ON while entering CLV drawing-in mode. Tracking and sled are turned OFF.]
6. Press the ► button.  
[Both tracking and sled are turned ON.]
7. Adjust RV702 so that the waveform is as shown in the figure below. (Focus gain adjustment)



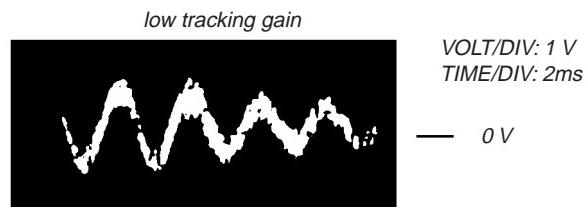
- Incorrect Examples (DC level changes more than on adjusted waveform)



8. Connect the oscilloscope to TP (TRACKING-Y) and TP (VC) on the CD board.
9. Adjust RV704 so that the waveform is as shown in the figure below. (tracking gain adjustment)



- Incorrect Examples (fundamental wave appears)



high tracking gain  
(high fundamental wave  
than for low gain )



### Note:

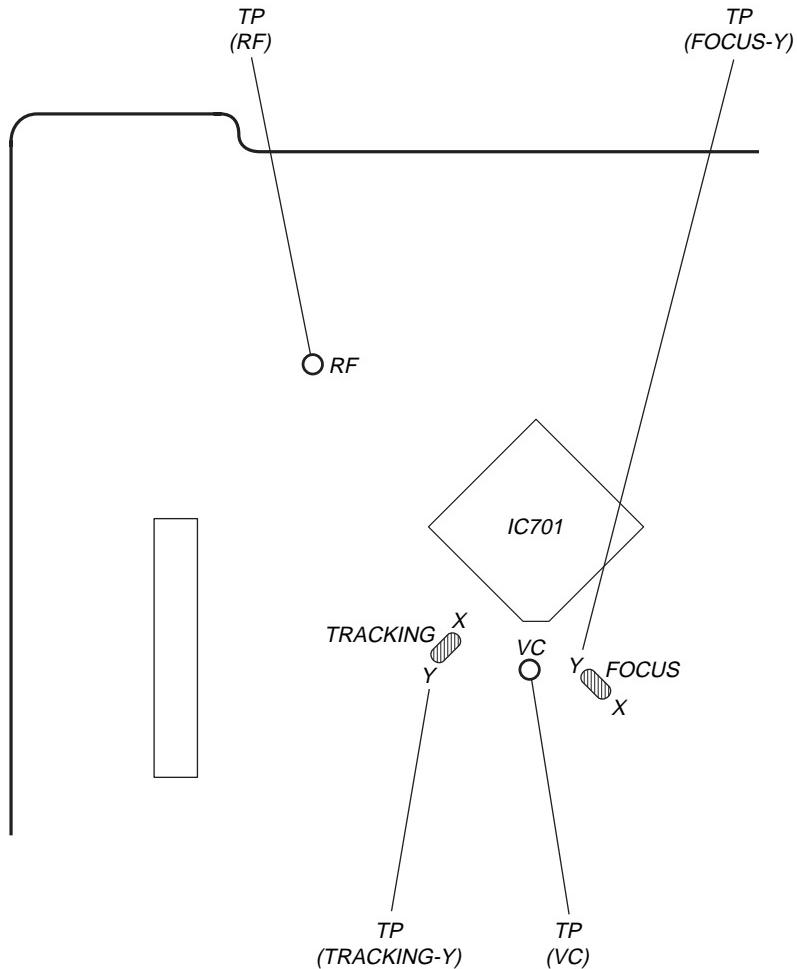
VOLT/DIV: with the 10:1 probe in used.

10. Release test mode after adjustment is completed.

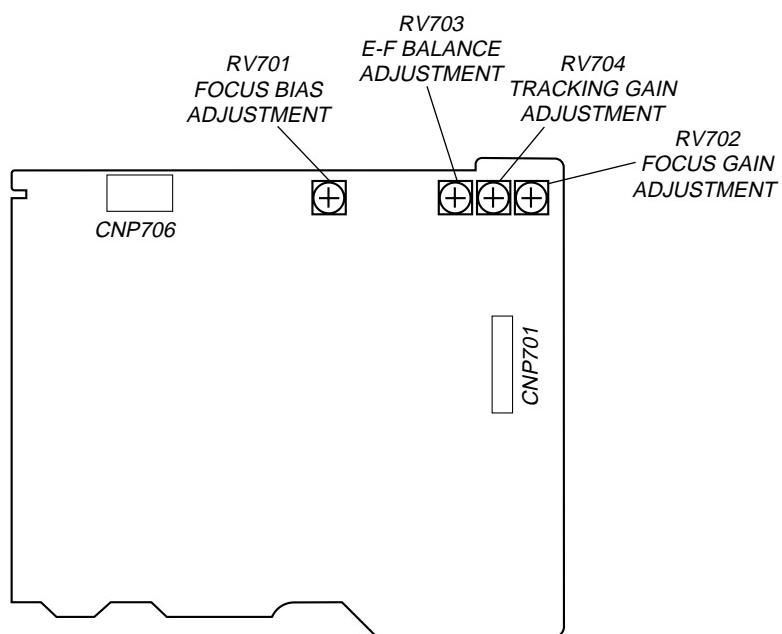
**Adjustment Location:** CD board (See page 17.)

**Connection and Adjustment Location:**

-CD board (conductor side)-

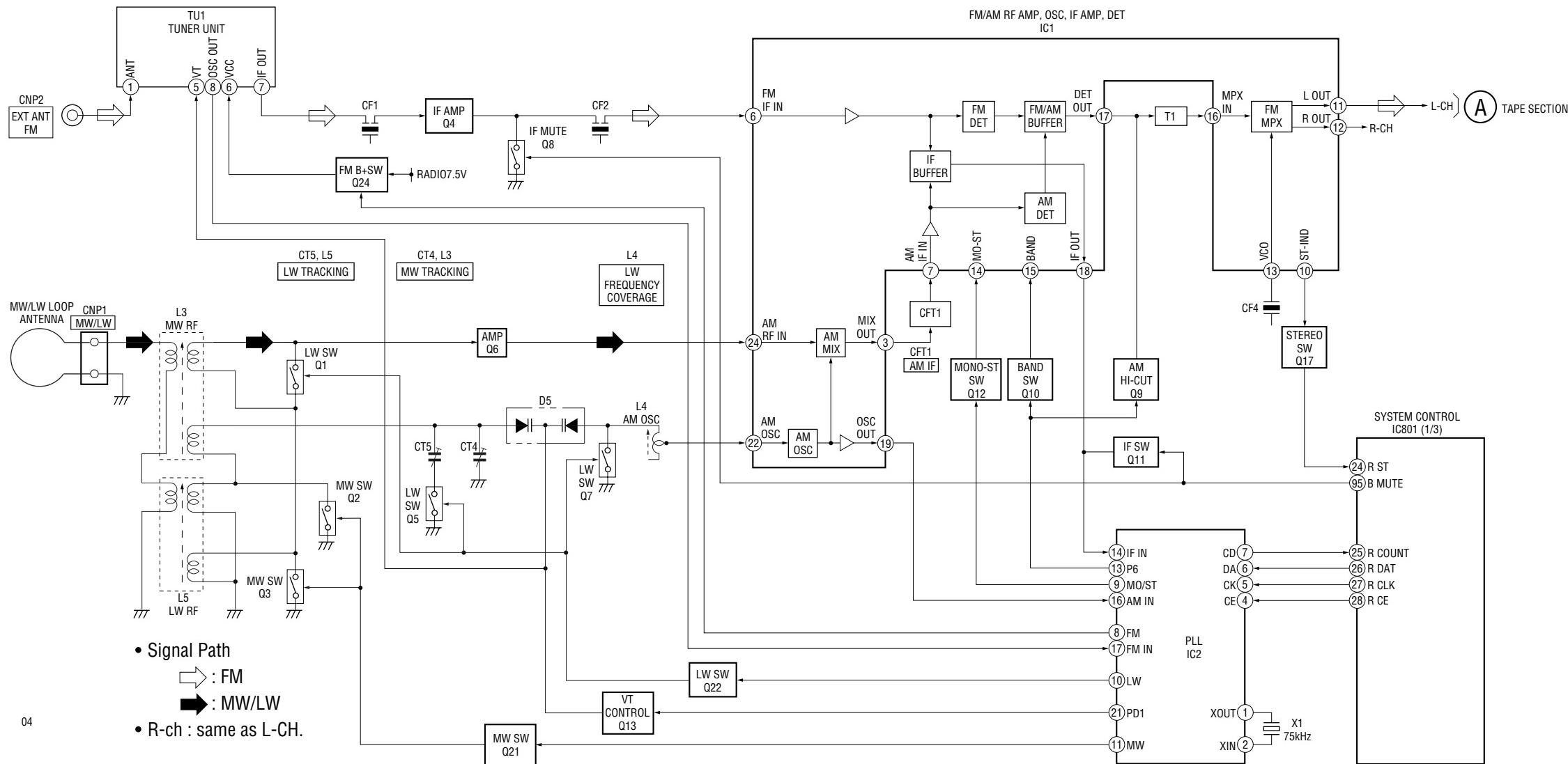


-CD board (component side)-

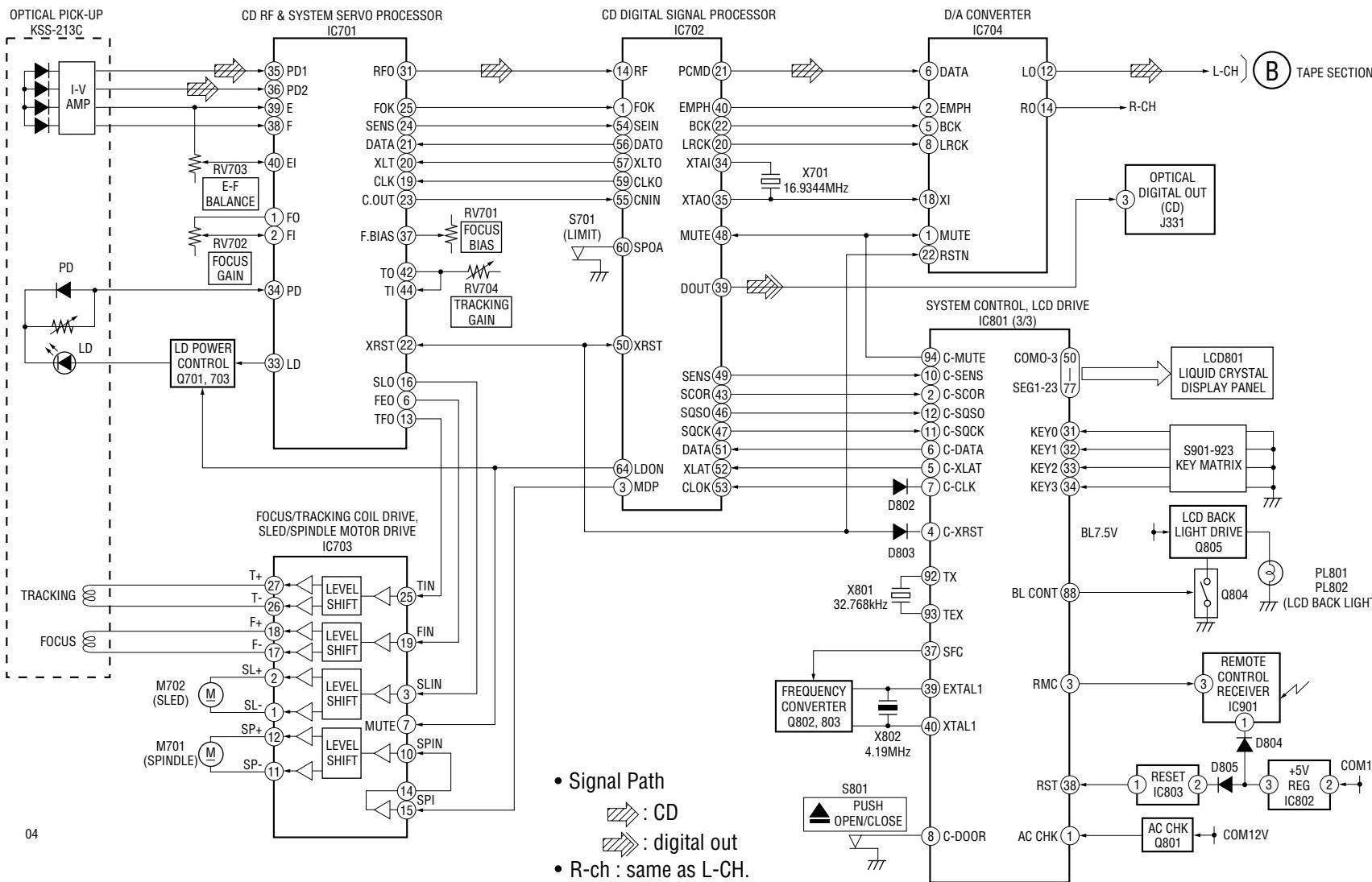


## SECTION 6 DIAGRAMS

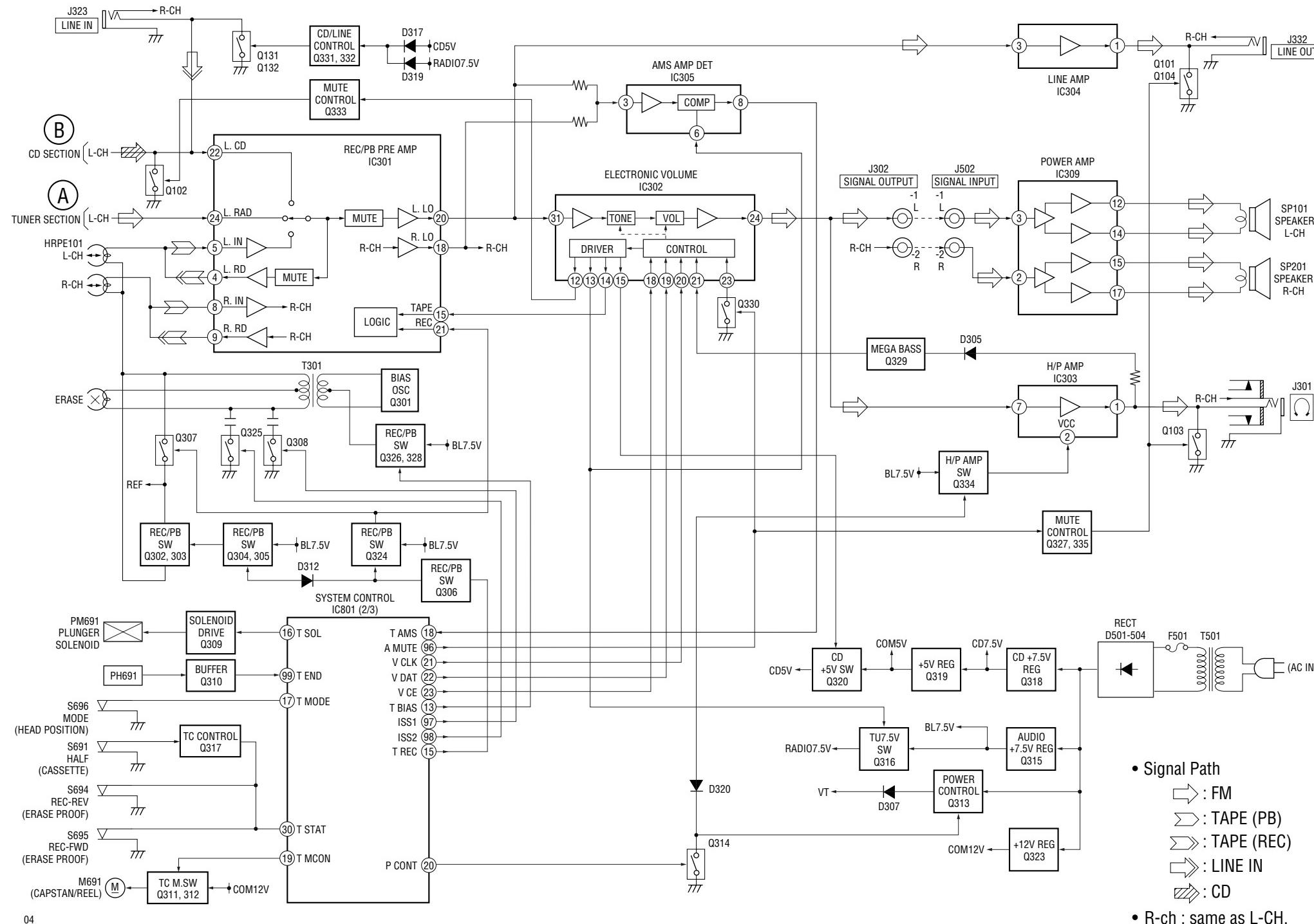
### 6-1. BLOCK DIAGRAM — TUNER SECTION —



## 6-2. BLOCK DIAGRAM — CD SECTION —



## 6-3. BLOCK DIAGRAM — TAPE SECTION —



MC-Service

#### 6-4. IC PIN DESCRIPTION

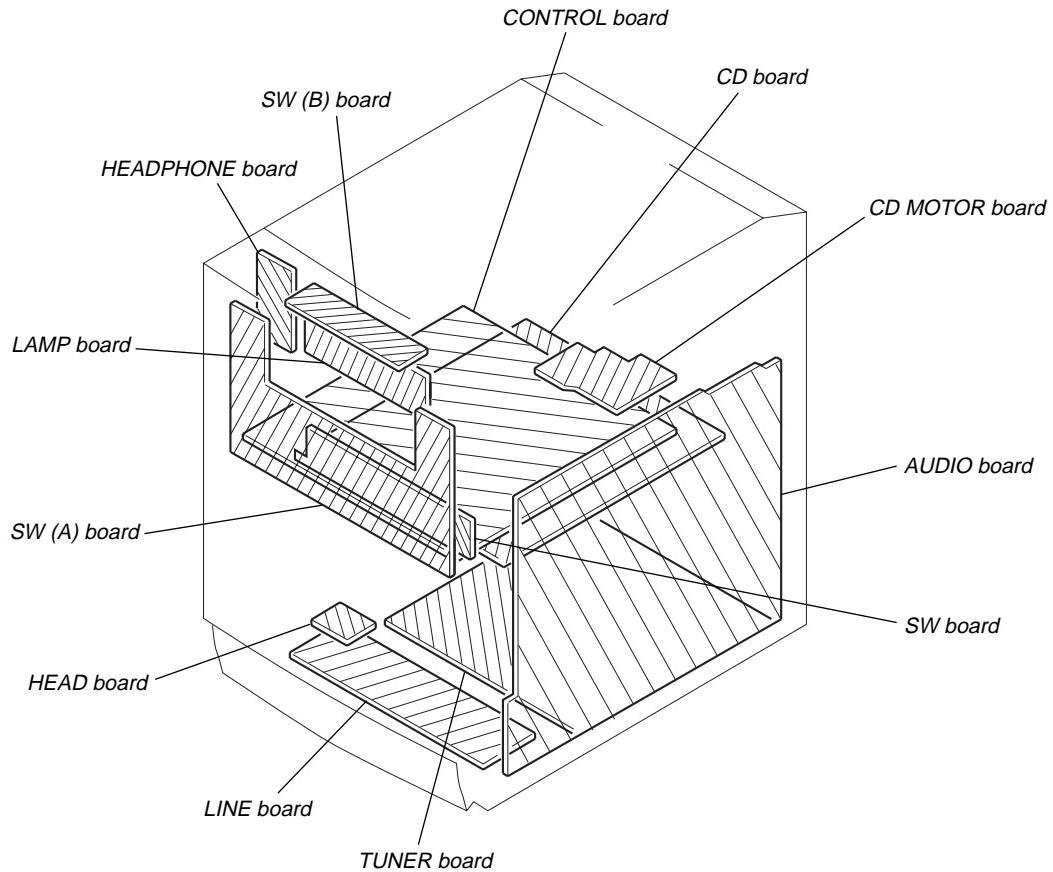
- **IC801 CXP83120A-022Q (SYSTEM CONTROL, LCD DRIVE) (EXCEPT East European Model)**
- **IC801 CXP83120A-031Q (SYSTEM CONTROL, LCD DRIVE) (East European Model)**

Pin No.	Pin Name	I/O	Pin Description
1	AC CHK	I	AC check input
2	C-SCOR	I	CD-SCOR input
3	RMC	I	Remote commander input
4	C-XRST	O	CD system reset output
5	C-XLAT	O	CD DSP (IC702) command latch output
6	C-DAT	O	CD DSP (IC702) command data output
7	C-CLK	O	Clock output for CD DSP (IC702) command
8	C-DOOR	I	Open/close detection input ("L": close, "H": open)
9	328/332	I	328/332 select input (Fixed at "H".)
10	C-SENC	I	CD-SENS input
11	C-SQCK	O	Clock output for CD SUBQ
12	C-SQSO	I	CD SUBQ input
13	T-BIAS	I	Tape REC BIAS input
14	—	—	Not used (Open)
15	T-REC	I	Tape REC input
16	T-SOL	O	Plunger control output
17	T-MODE	O	HEAD switching output
18	T-AMS	I	AMS sensitivity switching
19	T-MCON	O	Motor control output ("H": Motor ON)
20	P-CON	O	Power on/off control output
21	V-CLK	O	Volume clock output
22	V-DAT	O	Volume data output
23	V-CE	O	Electrical volume (IC302) chip enable output
24	R-ST	I	Stereo detection input
25	R-COUNT	I	Tuner PLL IC count input
26	R-DAT	O	Tuner PLL IC data output
27	R-CLK	O	Tuner PLL IC clock output
28	R-CE	O	Tuner PLL IC chip enable output
29	9K/10K	I	9K/10K select input (Not used.)
30	T-STAT	I	Tape detection input
31 – 34	KEY-0 – 3	I	Key return signal input
35	INIT	O	Initial setting output (East European model)
36	SIMUKE	I	Destination setting terminal
37	SFC	O	Shift clock ON/OFF out
38	RST	I	Reset input
39	EXTAL1	I	Clock oscillation input (4.19 MHz)
40	XTAL1	O	Clock oscillation output (4.19 MHz)
41	VSS	—	Ground (for A/D converter)
42	XTAL2	O	Clock oscillation output (Open)
43	EXTAL2	I	Clock oscillation output (Fixed at "L".)
44	AVREF	I	Reference voltage input (for A/D converter)
45	AVSS	—	Ground (for A/D converter)
46	VL	O	LCD bias resistor current control terminal (Cut off at standby)
47 – 49	VLC3 – 1	—	LCD bias power supply terminal
50 – 53	COM0 – 3	O	LCD common signal output terminal
54 – 77	SEG0 – 23	O	LCD segment signal output terminal
78 – 84	NC	—	Not used. (Open)
85 – 87	—	—	Not used. (Open)
88	BL-CONT	O	LCD Back light control output
89	VDD	—	Power supply (+5 V)

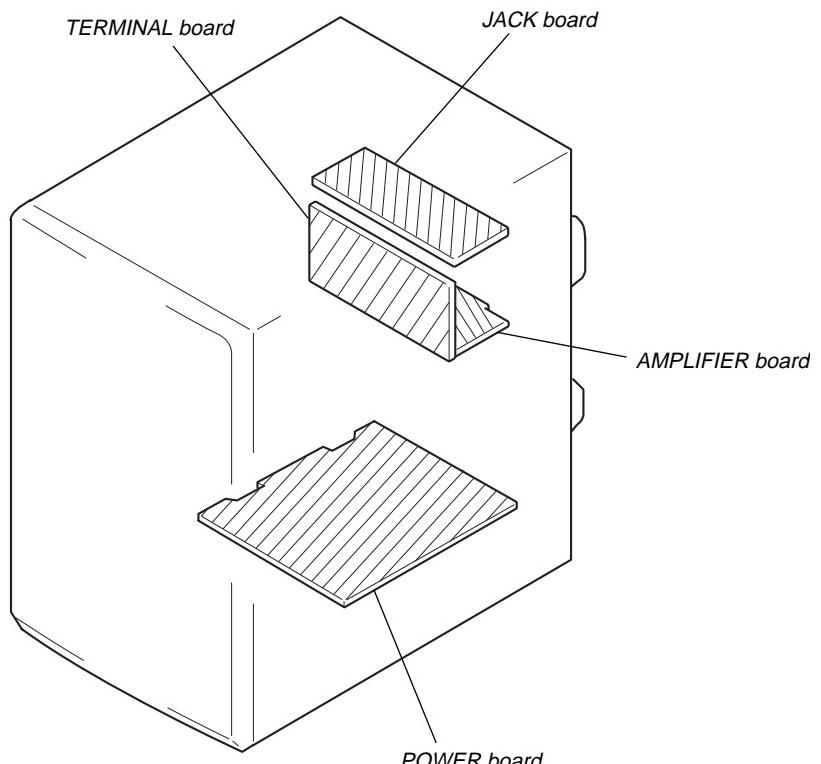
Pin No.	Pin Name	I/O	Pin Description
90	NC	—	Connected to the power supply.
91	VSS	—	Ground
92	TX	O	Crystal connection for clock oscillation. (32.768 kHz)
93	TEX	I	Crystal connection for clock oscillation. (32.768 kHz)
94	C-MUTE	O	Mute output for CD.
95	B-MUTE	O	Mute output for Tuner.
96	A-MUTE	O	Mute output for Audio.
97	ISS1	I	ISS1 switch input
98	ISS2	I	ISS2 switch input
99	T-END	I	Tape end detection input
100	NC	—	Not used. (Open)

## 6-5. CIRCUIT BOARDS LOCATION

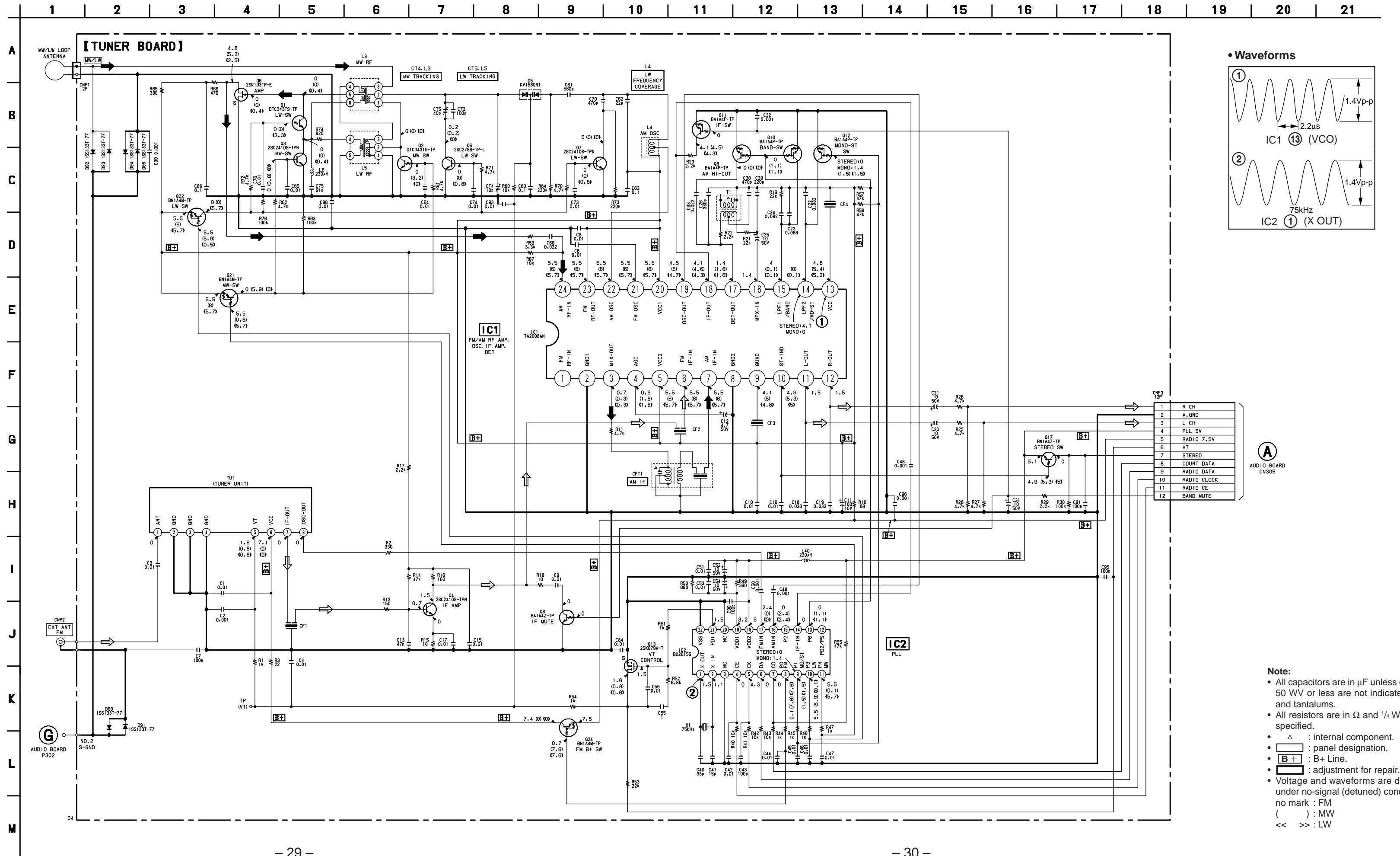
### – Main Section –



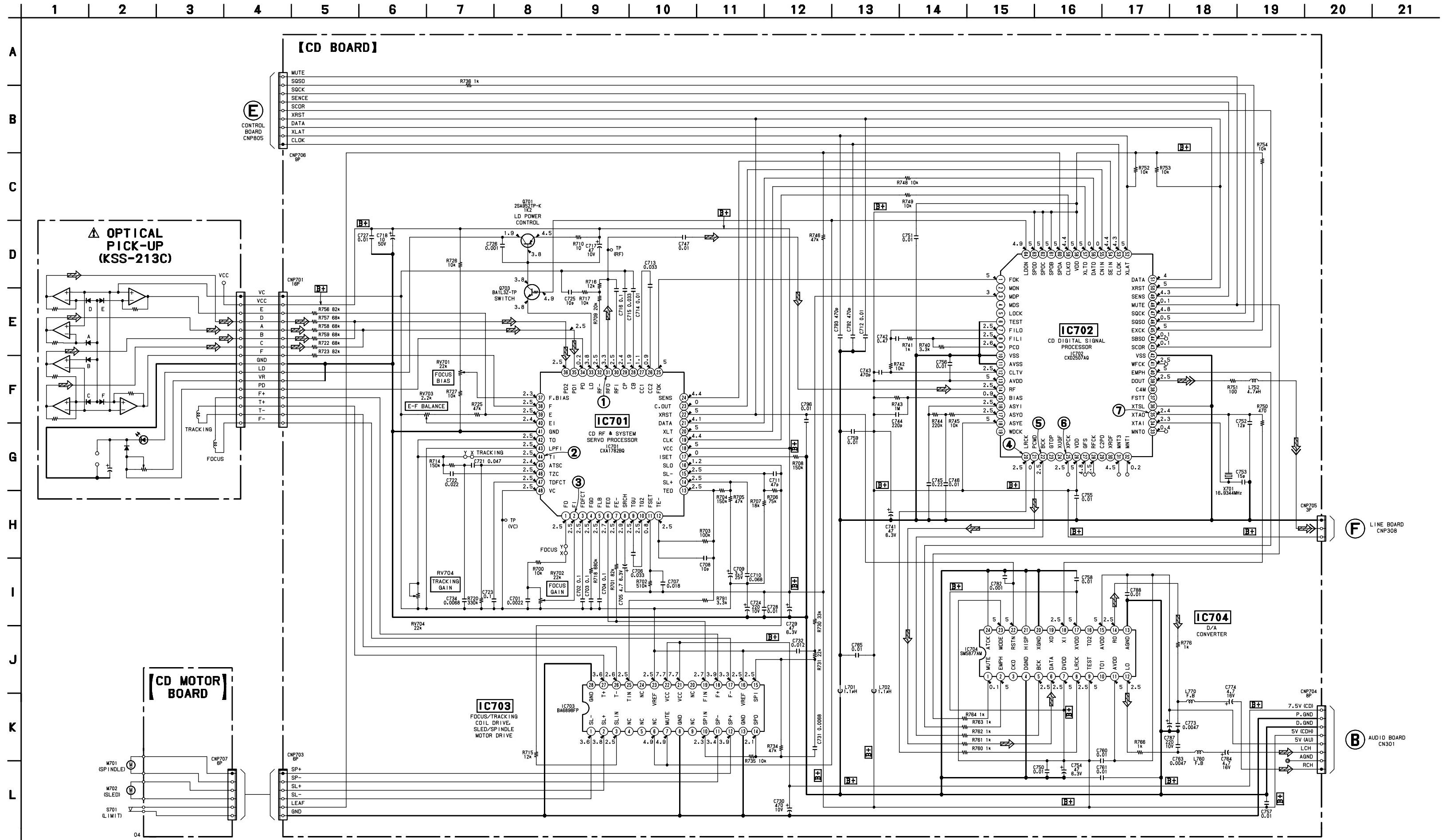
### – Speaker (L) Section –



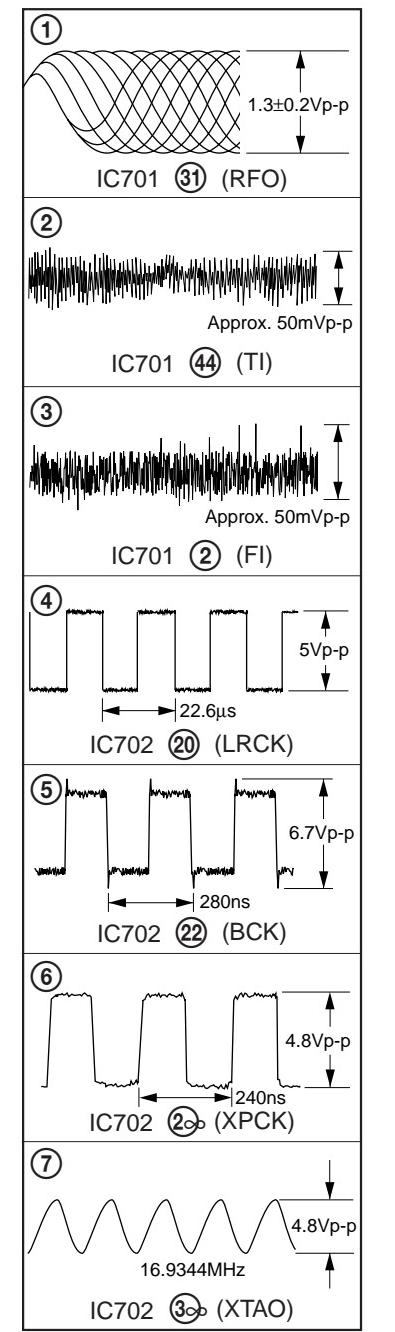
## 6-7. SCHEMATIC DIAGRAM — TUNER SECTION —



## 6-9. SCHEMATIC DIAGRAM — CD SECTION — • Refer to page 55 for IC Block Diagrams.



## • Waveforms



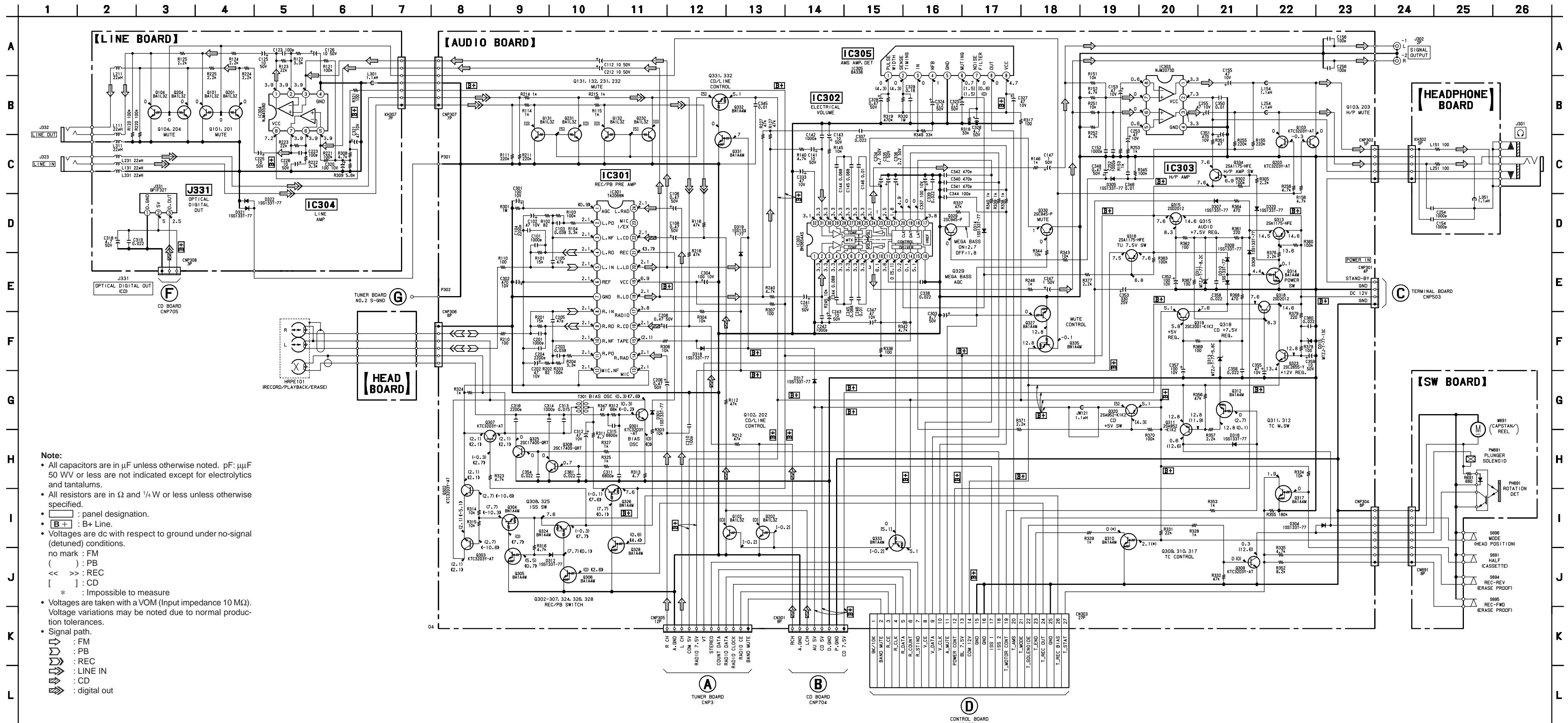
## Note:

- All capacitors are in  $\mu\text{F}$  unless otherwise noted. pF:  $\mu\text{F}$  50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in  $\Omega$  and  $1/4 \text{W}$  or less unless otherwise specified.

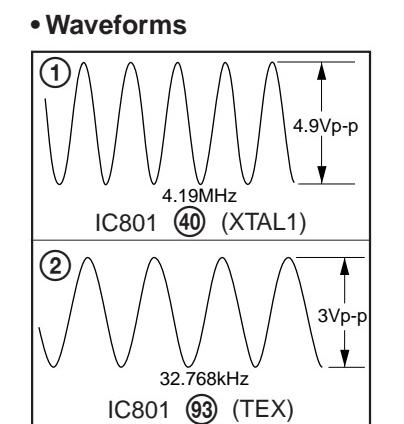
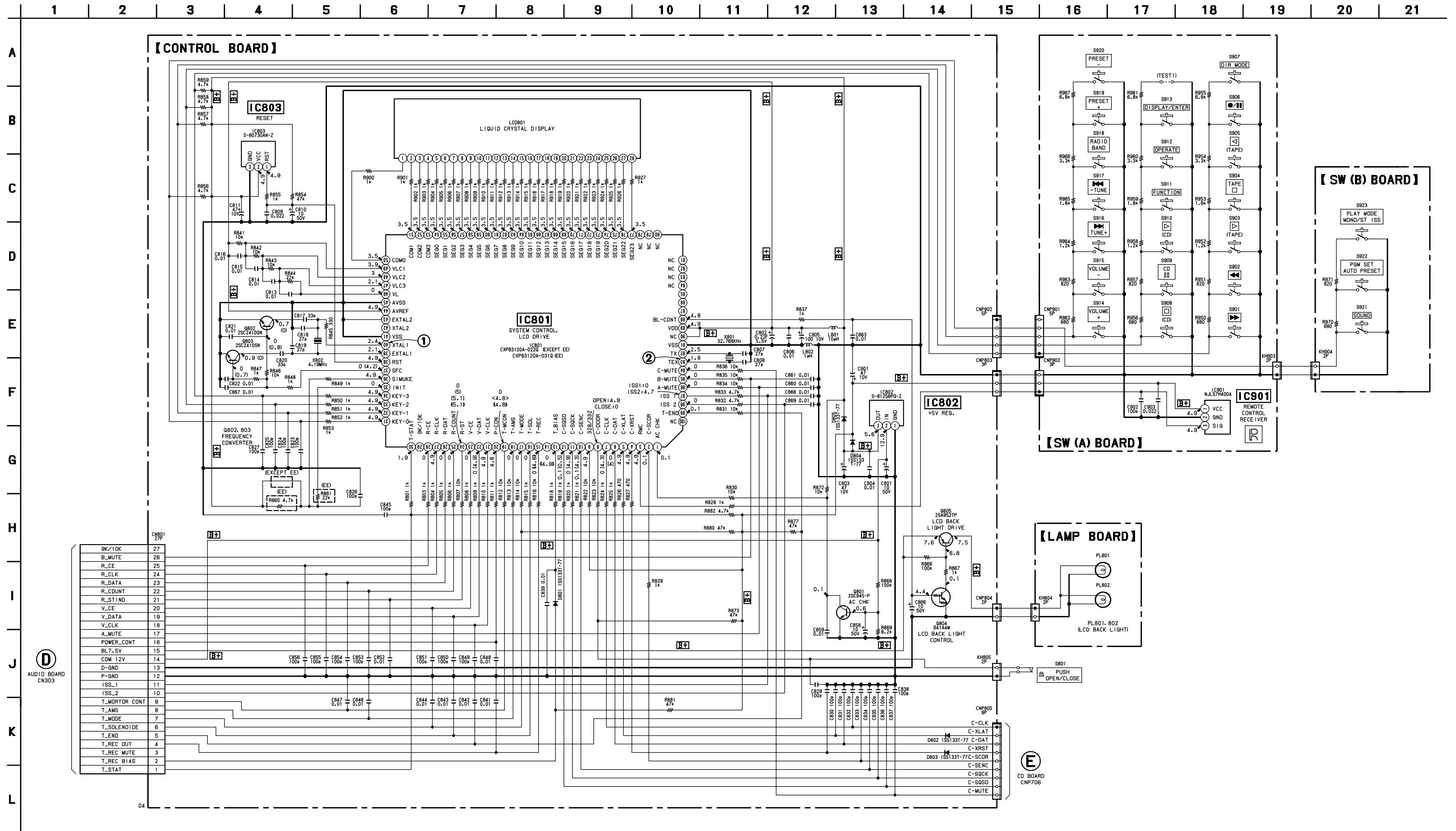
Note: The components identified by mark  $\triangle$  or dotted line with mark  $\triangle$  are critical for safety. Replace only with part number specified.

- $\square$ : B+ Line.
- $\square$ : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
- no mark : CD
- Voltages are taken with a VOM (Input impedance  $10 \text{ M}\Omega$ ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with an oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
- $\Rightarrow$  : CD
- $\Rightarrow$  : digital out

## 6-11. SCHEMATIC DIAGRAM — MAIN SECTION — • Refer to page 57 for IC Block Diagrams.

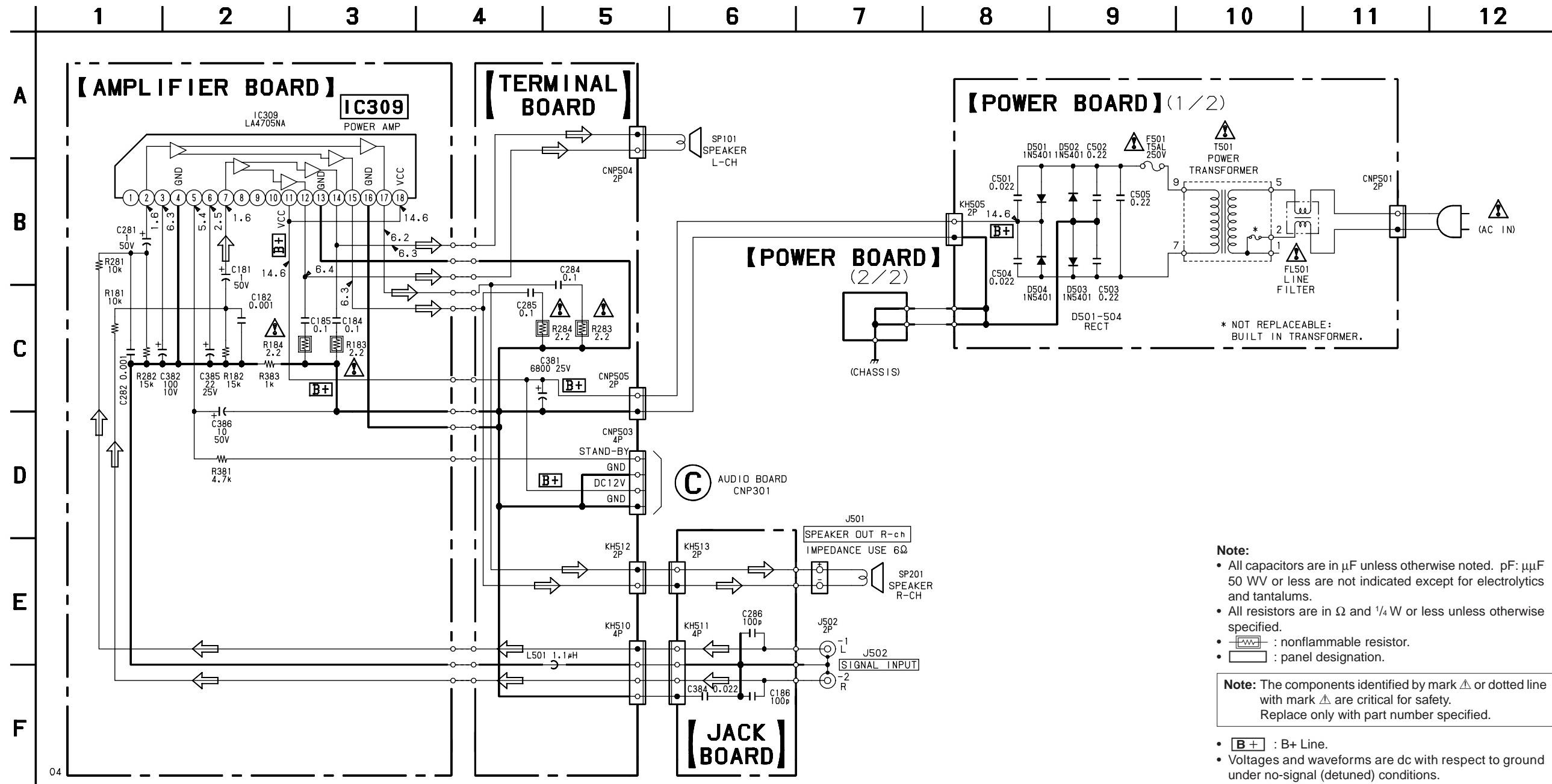


## 6-13. SCHEMATIC DIAGRAM — CONTROL SECTION —



- Note:**
- All capacitors are in  $\mu\text{F}$  unless otherwise noted.  $\text{pF}$ :  $\mu\text{F}$  50 WV or less are not indicated except for electrolytics and tantalums.
  - All resistors are in  $\Omega$  and  $1/4 \text{W}$  or less unless otherwise specified.
  - : panel designation.
  - [ ] : B Line.
  - Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  - no mark : FM
  - ( ) : PB
  - <> : REC
  - [ ] : CD
  - Voltages are taken with a VOM (Input impedance 10 M $\Omega$ ). Voltage variations may be noted due to normal production tolerances.
  - Waveforms are taken with an oscilloscope. Voltage variations may be noted due to normal production tolerances.
  - Circled numbers refer to waveforms.
  - Abbreviation
  - EE : East European model.

## 6-15. SCHEMATIC DIAGRAM — POWER AMPLIFIER SECTION —



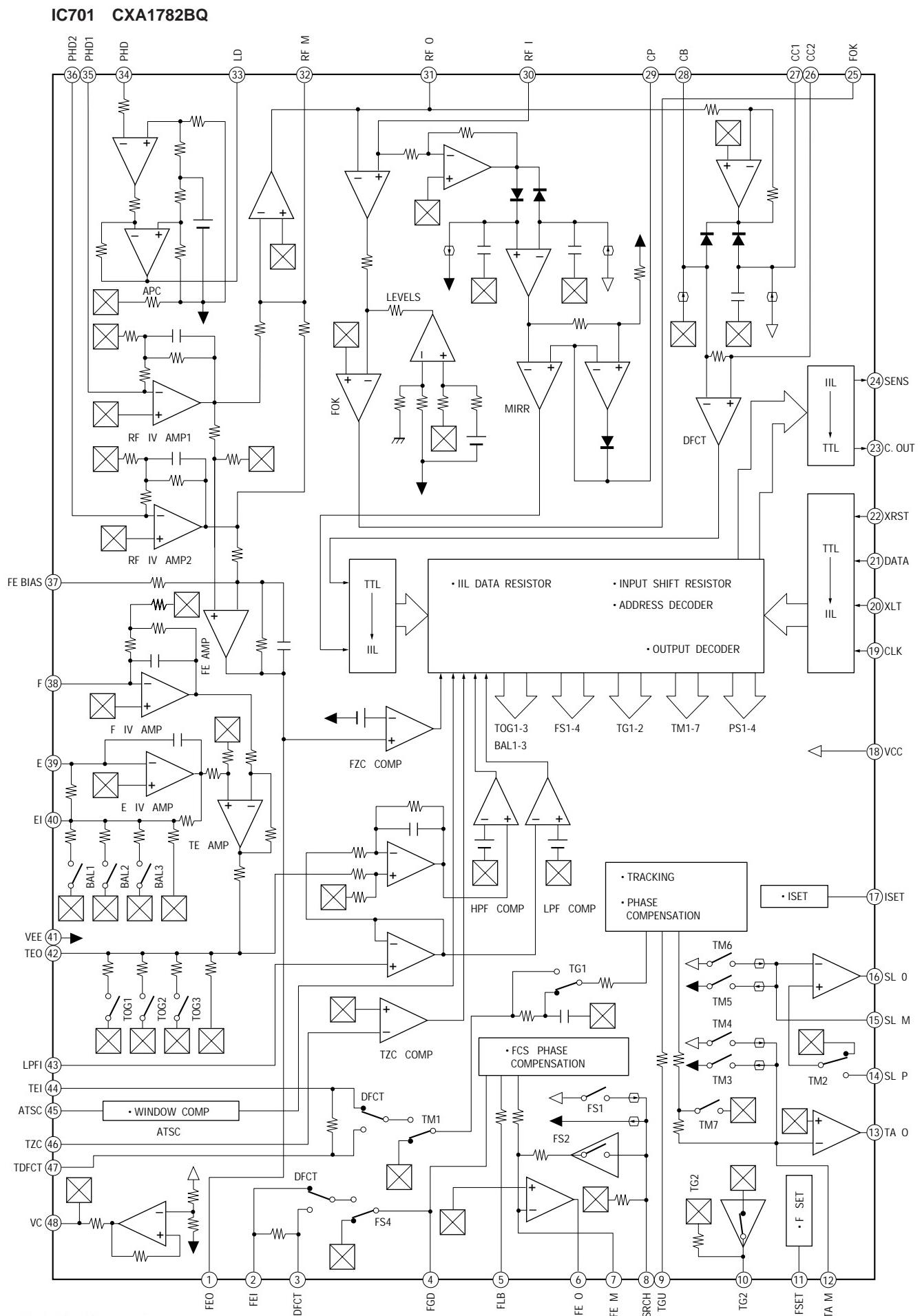
**Note:**

- All capacitors are in  $\mu\text{F}$  unless otherwise noted. pF:  $\mu\mu\text{F}$  50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in  $\Omega$  and  $1/4 \text{ W}$  or less unless otherwise specified.
- : nonflammable resistor.
- : panel designation.

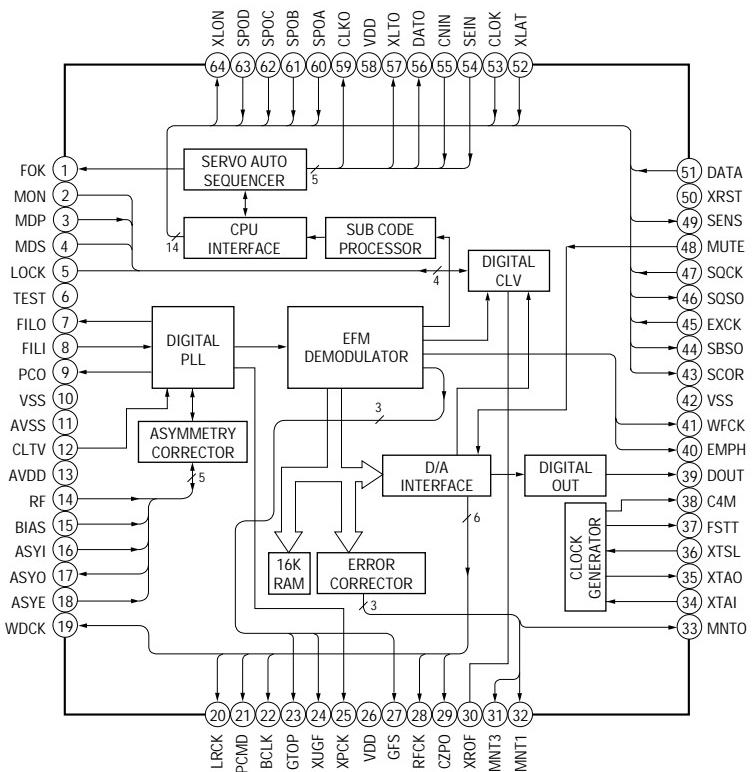
**Note:** The components identified by mark  $\triangle$  or dotted line with mark  $\triangle$  are critical for safety. Replace only with part number specified.

- : B+ Line.
- : Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions. no mark : FM
- : Voltages are taken with a VOM (Input impedance  $10 \text{ M}\Omega$ ). Voltage variations may be noted due to normal production tolerances.
- : Signal path.  $\Rightarrow$  : FM

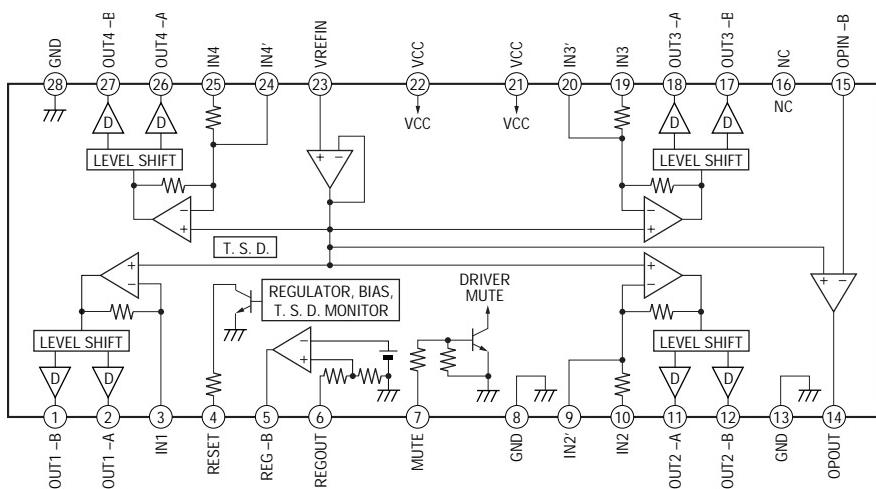
• IC Block Diagrams  
– CD Section –



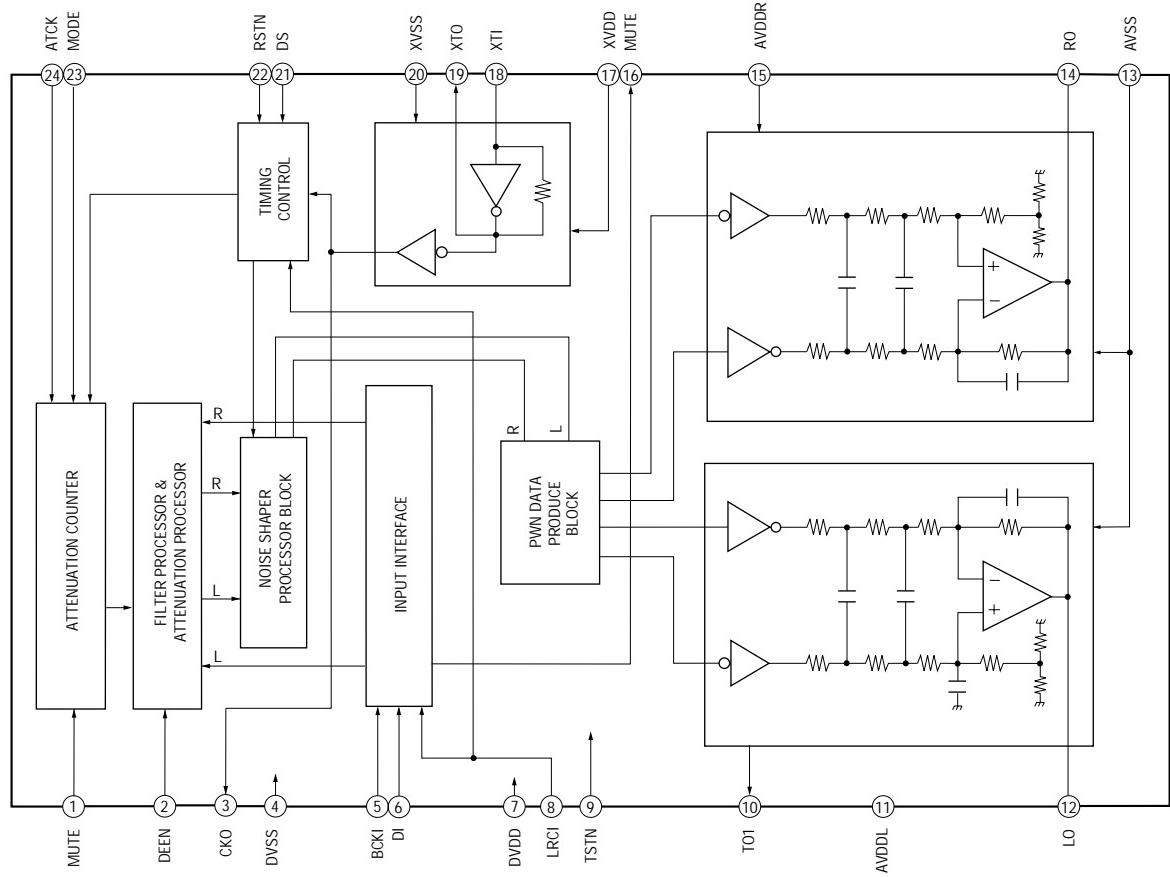
## IC702 CXD2507AQ



## IC703 BA6898FP

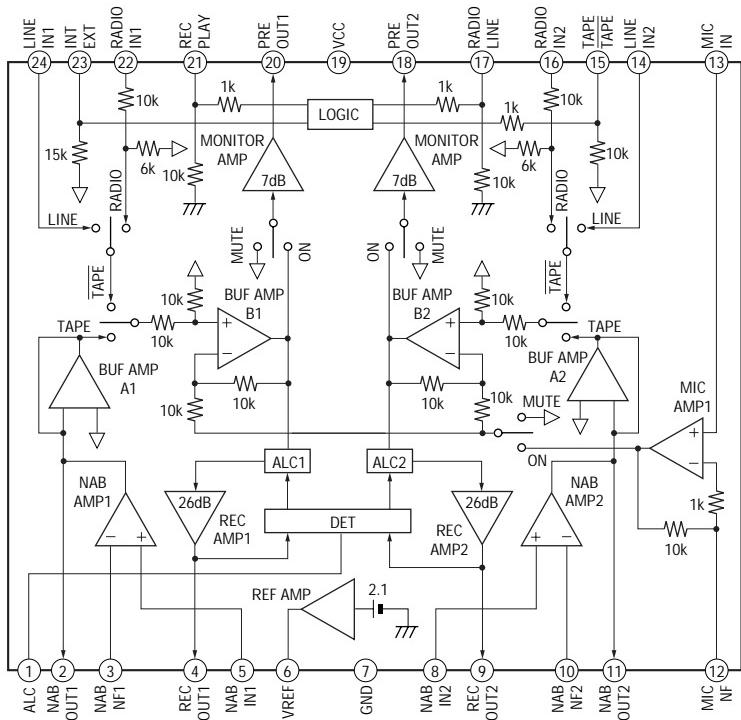


**IC704 SM5877AM**

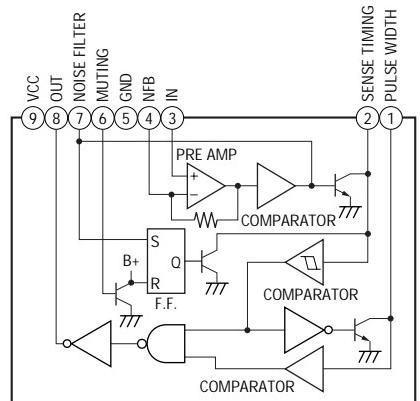


**- Main Section -**

**IC301 TA2068N**



**IC305 BA338**



## SECTION 7 EXPLODED VIEWS

**NOTE:**

- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked “\*” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Abbreviation
  - IT : Italian model
  - EE : East European model

- -XX and -X mean standardized parts, so they may have some difference from the original one.

- Color Indication of Appearance Parts Example :

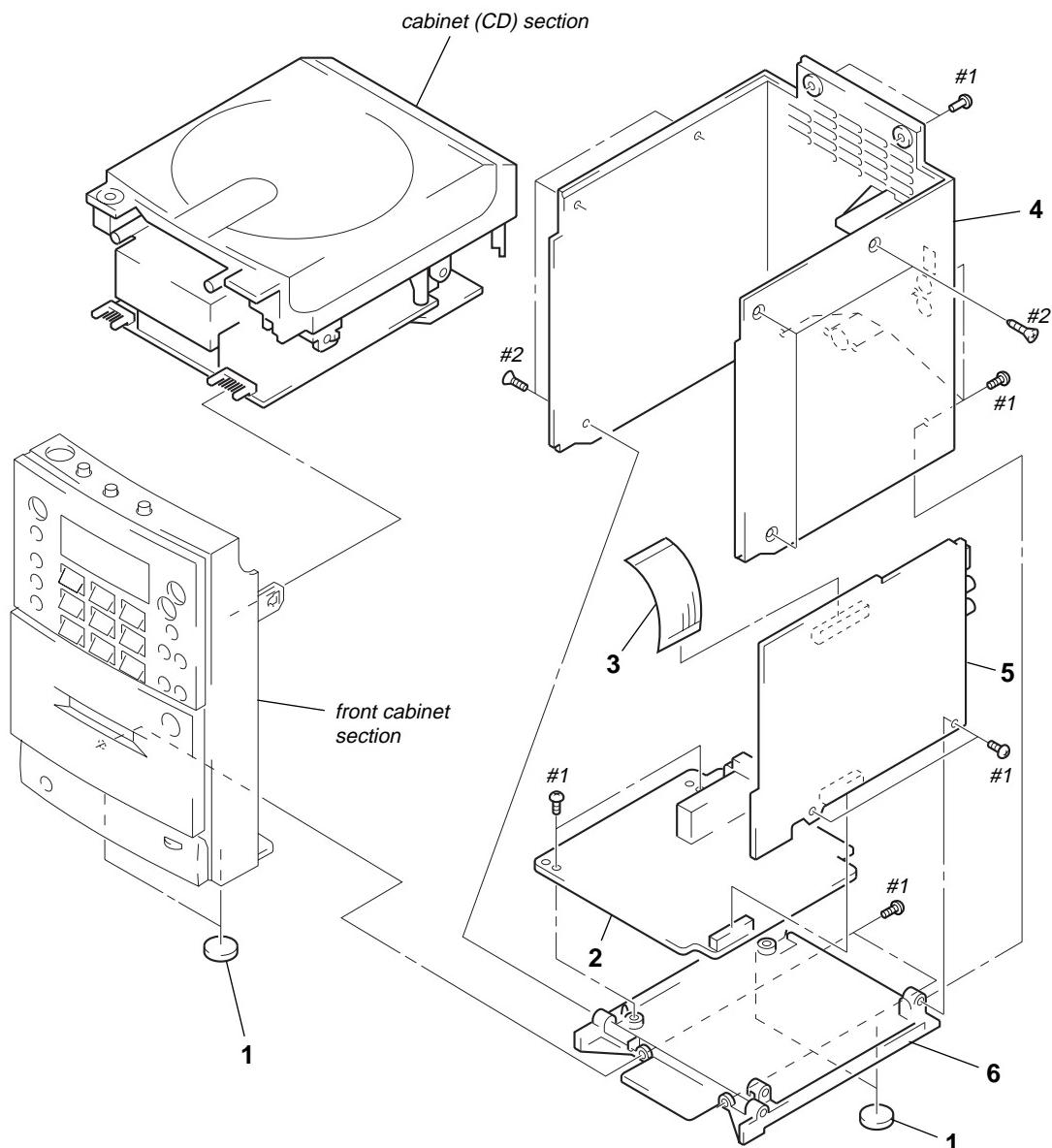
KNOB, BALANCE (WHITE) ... (RED)

↑                      ↑  
Parts Color Cabinet's Color

- Accessories and packing materials and hardware (# mark) list are given in the last of this parts list.

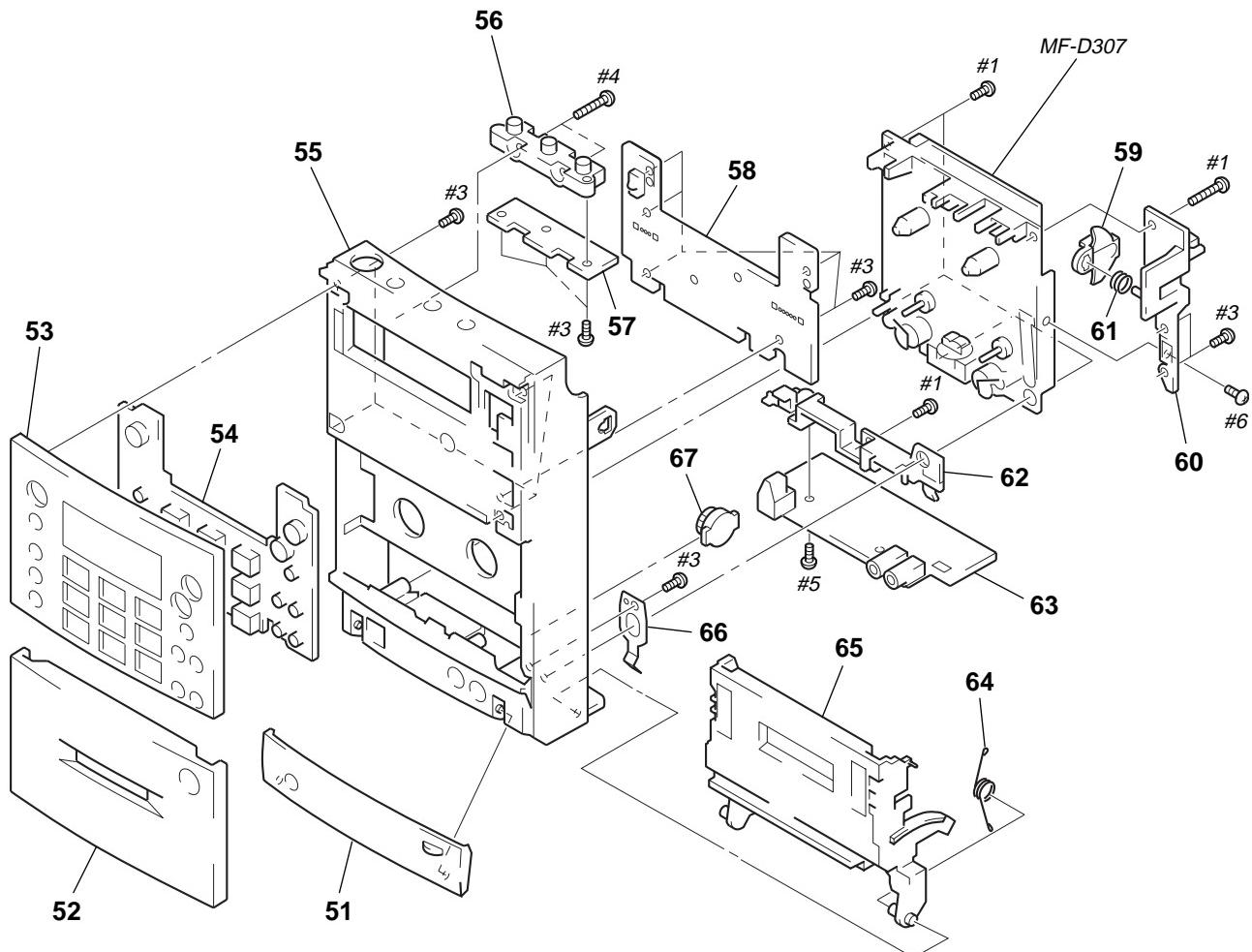
The components identified by mark ▲ or dotted line with mark. ▲ are critical for safety. Replace only with part number specified.

### 7-1. CASE SECTION



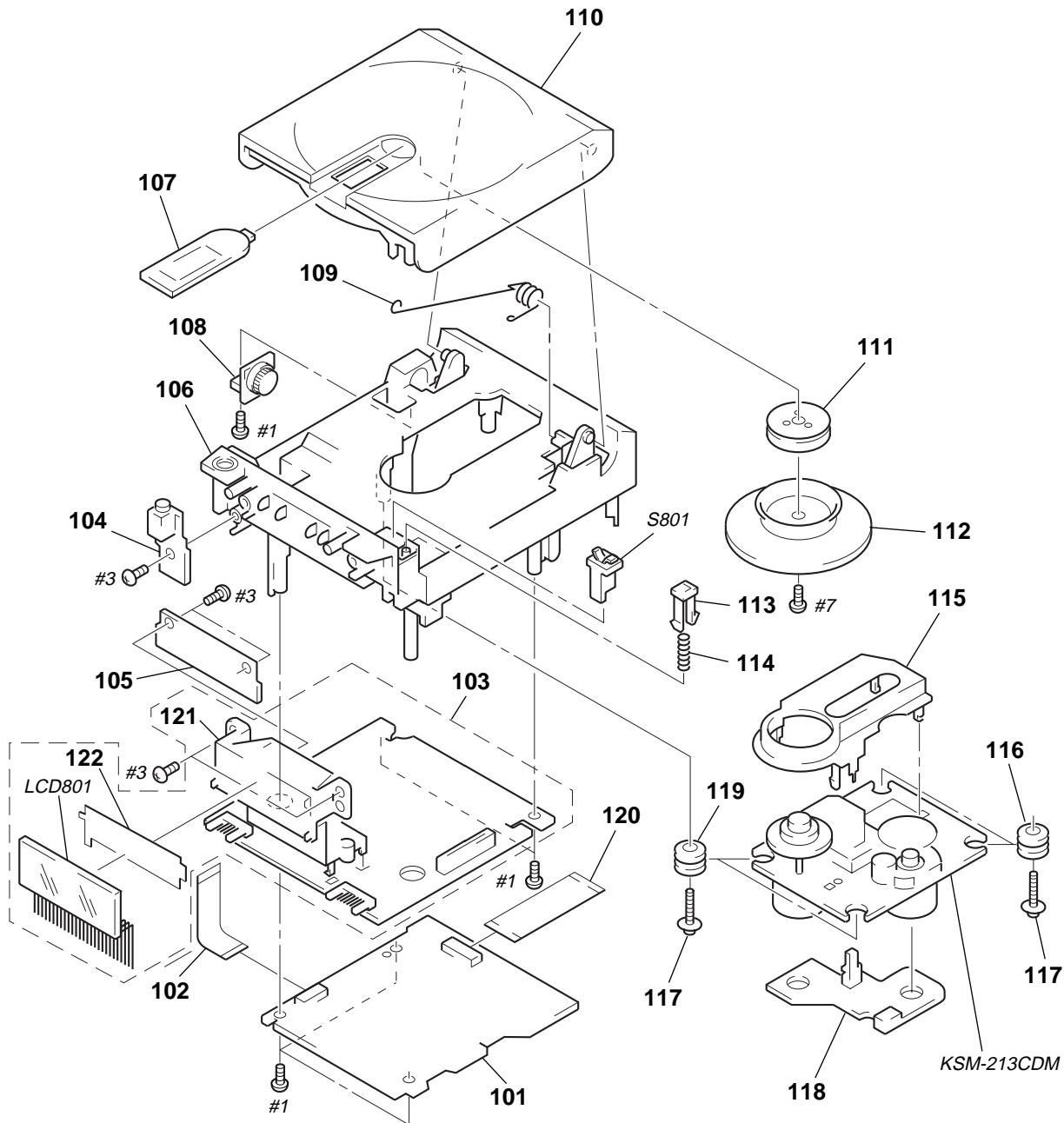
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	3-014-503-01	FOOT		3	1-782-296-11	WIRE, PARALLEL (FFC) (27 CORE)	
* 2	A-3321-478-A	TUNER BOARD, COMPLETE (EXCEPT IT,EE)		4	3-014-125-01	CABINET (REAR)	
* 2	A-3321-479-A	TUNER BOARD, COMPLETE (IT)		* 5	A-3321-480-A	AUDIO BOARD, COMPLETE	
* 2	A-3321-488-A	TUNER BOARD, COMPLETE (EE)		6	3-014-127-01	CASE (LOWER)	

## 7-2. CABINET (FRONT) SECTION



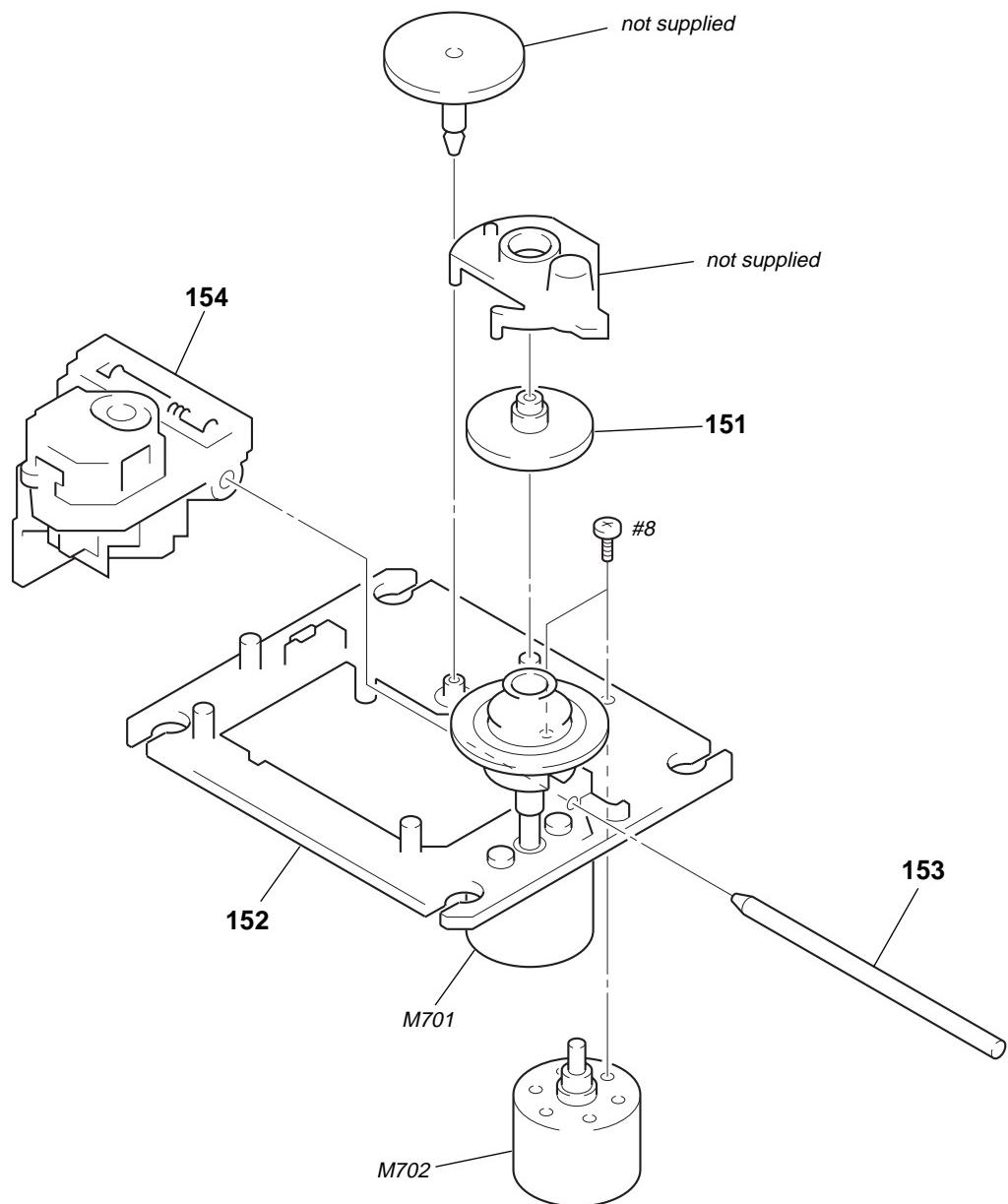
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
51	X-3373-799-1	LID (TERMINAL) ASSY		60	3-014-098-01	RETAINER (CASSETTE), LOCK	
52	X-3376-075-2	LID ASSY, CASSETTE		61	3-013-735-01	SPRING, COMPRESSION	
53	X-3376-074-1	PANEL ASSY, FRONT		62	3-014-100-01	HOLDER (TERMINAL)	
54	3-014-091-01	BUTTON (MAIN)		* 63	A-3321-474-A	LINE BOARD, COMPLETE	
55	3-014-090-01	CABINET (FRONT)		64	3-014-102-01	SPRING (CASSETTE)	
56	3-014-092-01	BUTTON (UPPER)		65	3-014-096-01	HOLDER (CASSETTE)	
* 57	1-666-185-11	SW (B) BOARD		66	3-014-103-01	SPRING (TERMINAL LID)	
* 58	1-666-184-11	SW (A) BOARD		67	3-343-248-01	DAMPER (P), SMALL	
59	3-014-097-01	PLATE (CASSETTE), LOCK					

### 7-3. CABINET (CD) SECTION



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
* 101	A-3321-485-A	CD BOARD, COMPLETE		113	3-014-131-01	LEVER	
102	1-782-294-11	WIRE, PARALLEL (FFC) (9 CORE)		* 114	3-014-132-01	SPRING, COMPRESSION	
* 103	A-3321-484-A	CONTROL BOARD, COMPLETE (EXCEPT EE)		115	3-910-116-01	COVER, CD	
* 103	A-3321-490-A	CONTROL BOARD, COMPLETE (EE)		116	3-910-095-11	RUBBER, VIBRATION PROOF	
* 104	1-666-187-11	HEADPHONE BOARD		117	3-916-006-01	SCREW (2.6X16)	
* 105	1-666-186-11	LAMP BOARD		118	1-639-678-12	CD MOTOR BOARD	
106	3-014-123-01	CABINET (CD)		119	3-910-095-01	RUBBER, VIBRATION PROOF	
107	3-014-129-01	WINDOW (CD)		120	1-769-069-11	WIRE (FLAT TYPE) (16 CORE)	
108	3-351-377-11	DAMPER		* 121	3-014-121-01	HOLDER (LCD)	
109	3-014-128-01	SPRING (CD)		* 122	3-014-130-01	SHEET, DIFFUSION	
110	3-014-124-01	LID (CD)		LCD801	1-801-786-11	DISPLAY PANEL, LIQUID CRYSTAL	
111	1-452-732-11	MAGNET		S801	1-692-960-11	SWITCH, PUSH (1 KEY) (OPEN/CLOSE)	
112	3-910-112-01	PLATE, CHUCKING					

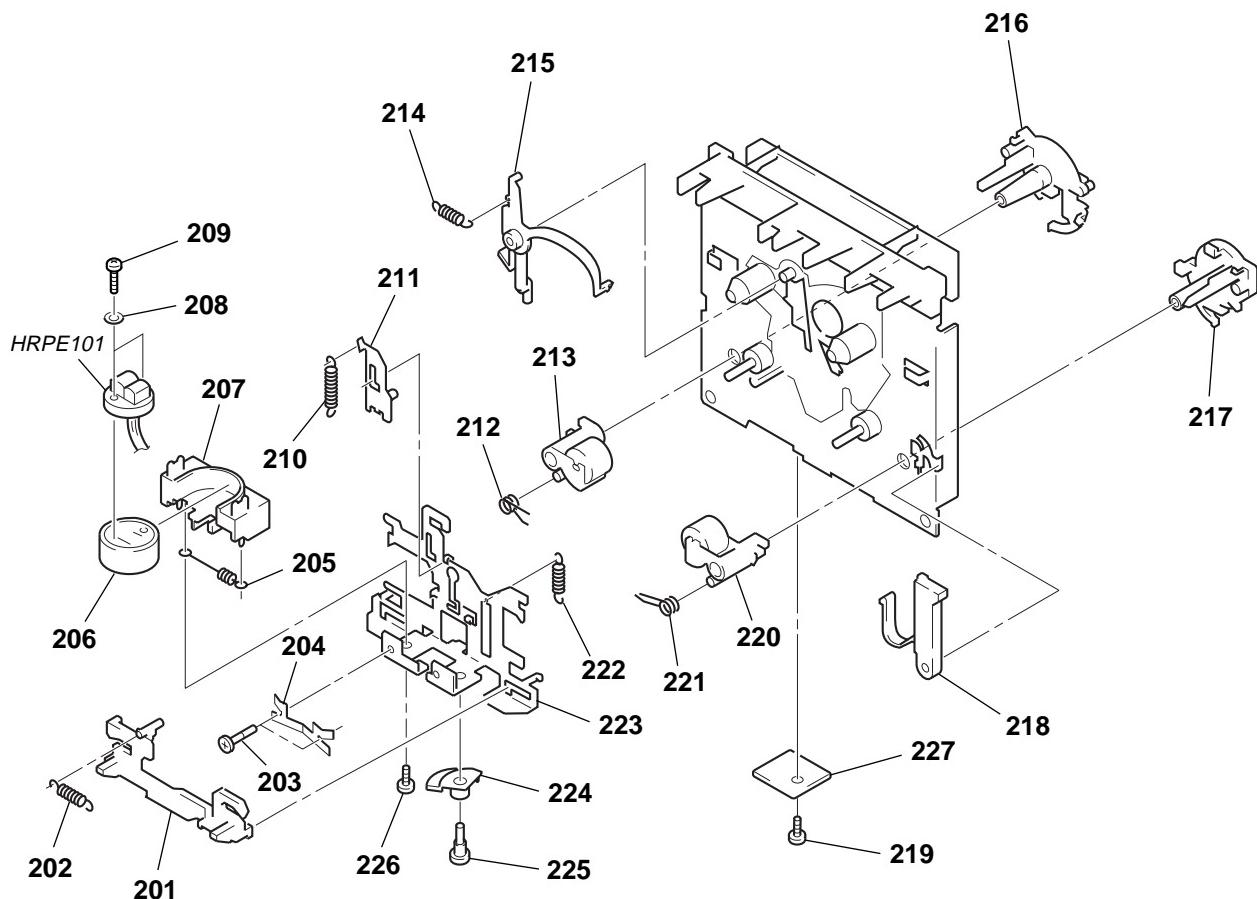
**7-4. OPTICAL PICK-UP SECTION  
(KSM-213CDM)**



The components identified by mark  $\triangle$  or dotted line with mark  $\triangle$  are critical for safety.  
Replace only with part number specified.

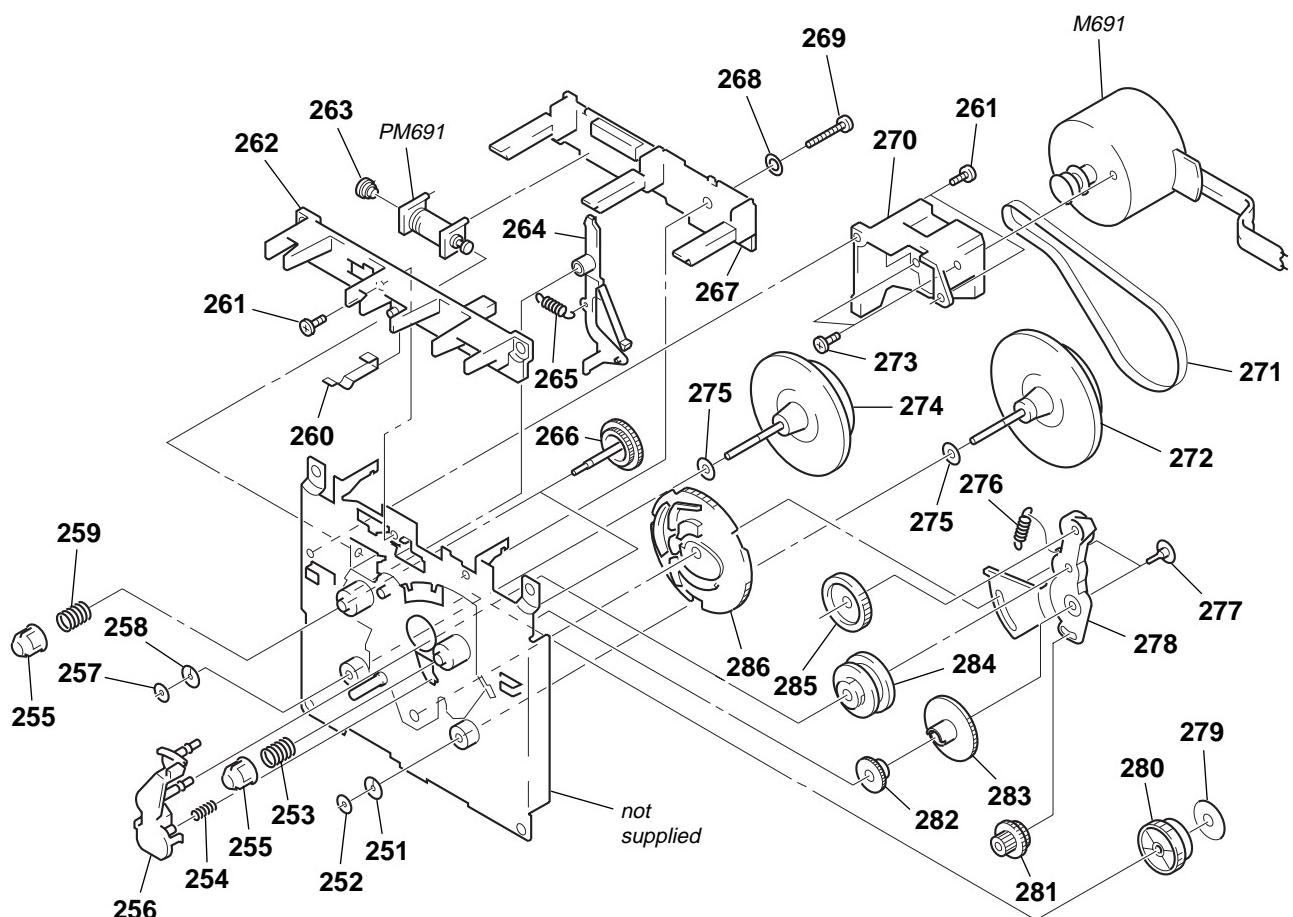
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
151	2-627-003-02	GEAR (B) (RP)		153	2-626-908-01	SHAFT, SLED	
152	X-2626-202-2	CHASSIS ASSY (MB), MOTOR (SPINDLE) (INCLUDING M701)		$\triangle$ 154	8-848-483-05	PICK-UP, OPTICAL KSS-213C/Q-RP	
				M702	X-2625-769-1	GEAR ASSY (MB), MOTOR (SLED)	

**7-5. TAPE MECHANISM DECK SECTION-1  
(MF-D307)**



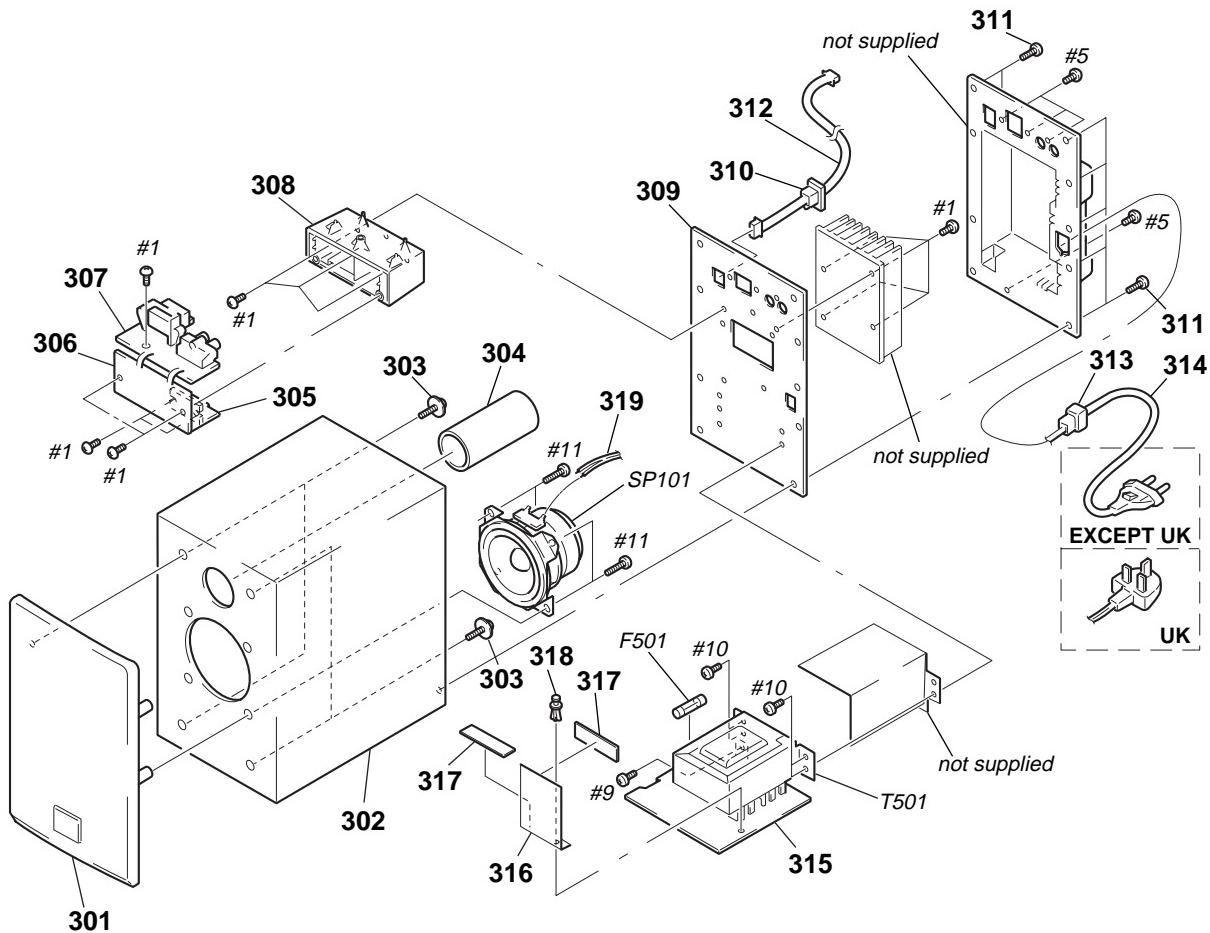
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
201	3-938-905-01	HEAD, LEVER		* 215	3-938-916-01	BRAKE, ARM	
202	3-938-940-01	SPRING (L)		* 216	3-938-914-01	FRAME (C)	
203	3-938-941-01	SCREW (A)		* 217	3-938-913-01	FRAME (B)	
204	3-938-906-01	AZIMUTH, SPRING		* 218	3-938-909-01	LOCK, EJECT	
205	3-017-432-01	SPRING (A)		219	3-938-944-01	SCREW (D)	
206	3-938-901-01	HEAD, HOLDER		220	3-017-591-01	ARM (PINCH R) ASSY	
* 207	3-938-904-01	HEAD, FRAME		221	3-938-937-01	SPRING (I)	
208	3-938-902-01	WASHER		222	3-938-938-01	SPRING (J)	
209	3-938-903-01	SCREW		* 223	3-938-911-01	HEAD (B), CHASSIS	
210	3-938-935-01	SPRING (G)		224	3-938-907-01	HEAD, GEAR ARM	
* 211	X-3372-610-1	ASSIST ASSY, LEVER		225	3-938-943-01	SCREW (C)	
212	3-938-933-01	SPRING (E)		226	3-938-942-01	SCREW (B)	
213	3-017-592-01	ARM (PINCH L) ASSY		* 227	1-662-743-11	HEAD BOARD	
214	3-938-934-01	SPRING (F)			HRPE1011-500-480-11	HEAD, MAGNETIC (REC/PB/ERASE)	

## **7-6. TAPE MECHANISM DECK SECTION-2 (MF-D307)**



<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>
251	3-938-949-01	WASHER (B)		270	3-017-431-01	BRACKET (MM)	
252	3-938-951-01	WASHER (D)		271	3-017-430-01	BELT	
253	3-938-936-01	SPRING (H)		272	3-017-596-01	FLYWHEEL (R) ASSY	
254	3-938-930-01	SPRING (B)		273	3-017-434-01	SCREW (H)	
255	3-938-910-01	REEL, CAP		274	3-017-595-01	FLYWHEEL (L) ASSY	
* 256	3-938-912-01	ARM (UD)		275	3-938-950-01	WASHER (C)	
257	3-938-952-01	WASHER (E)		276	3-017-433-01	SPRING (K)	
258	3-938-948-01	WASHER (A)		277	3-938-946-01	SCREW (F)	
259	3-938-932-01	SPRING (D)		* 278	3-938-919-01	ARM (FR)	
260	3-938-908-01	CASSETTE, SPRING		279	3-017-435-01	REFLECTOR	
261	3-938-945-01	SCREW (E)		280	3-017-429-01	GEAR (REF)	
262	3-017-428-01	FRAME (D)		281	3-938-917-01	GEAR (A)	
263	3-938-920-01	PLUNGER, K		282	3-938-924-01	GEAR (P)	
* 264	3-938-918-01	TRIGGER, ARM		283	3-938-923-01	GEAR (FR)	
265	3-938-931-01	SPRING (C)		284	X-3372-613-1	CLUTCH ASSY	
266	3-938-921-01	GEAR (REEL)		285	3-938-925-01	GEAR (IDL)	
* 267	1-662-742-11	SW BOARD		286	3-938-922-01	GEAR (CAM)	
268	3-938-954-01	WASHER (G)		M691	3-016-425-01	MOTOR ASSY (CAPSTAN/REEL)	
269	3-938-947-01	SCREW (G)		PM691	1-454-806-11	SOLENOID, PLUNGER	

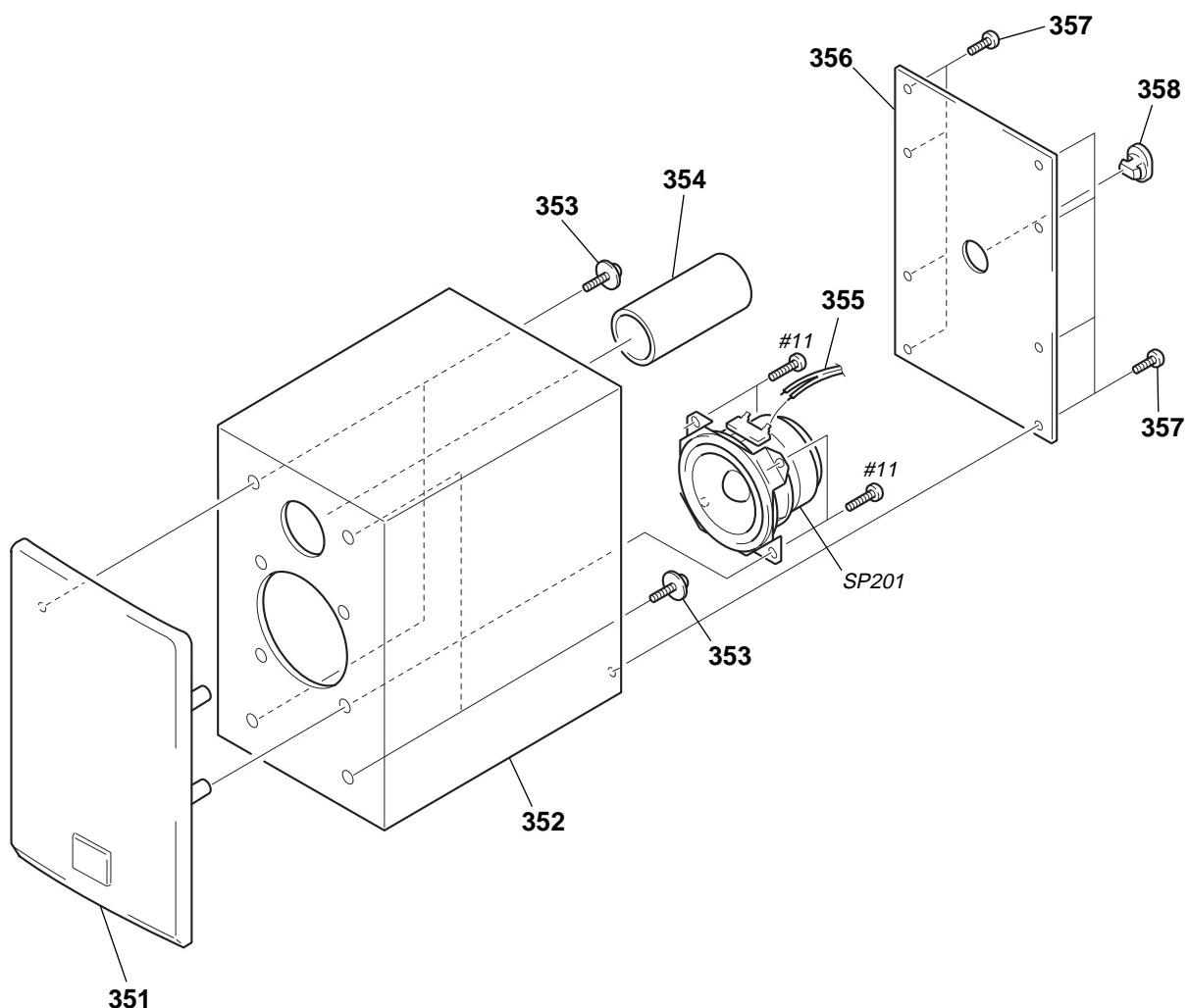
## **7-7. SPEAKER (L) SECTION**



The components identified by mark  or dotted line with mark.  are critical for safety. Replace only with part number specified.

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>
301	X-3376-076-1	SPEAKER (FRONT) SUB ASSY		313	3-703-244-11	BUSHING (2104), CORD	
302	3-028-031-11	BOX, SPEAKER		△ 314	1-575-651-11	CORD, POWER (EXCEPT UK)	
303	3-365-853-01	SCREW (-BTPWH) (3X12)		△ 314	1-751-520-11	CORD, POWER (UK)	
304	3-028-028-01	DUCT (SPEAKER)		* 315	1-671-064-11	POWER BOARD	
* 305	1-671-065-11	AMPLIFIER BOARD		* 316	3-017-037-01	INSULATOR	
* 306	1-671-066-11	TERMINAL BOARD		317	3-568-749-00	CUSHION, ECM	
* 307	1-671-068-11	JACK BOARD		318	4-812-134-11	RIVET (DIA. 3.5), NYLON	
308	3-028-034-01	BRACKET (AMP)		319	1-782-509-11	CORD, SPEAKER	
309	3-028-029-01	CHASSIS (L), REAR		△ F501	1-532-505-31	FUSE, TIME-LAG (T5A/250V)	
* 310	3-014-106-01	BUSHING (4P), CORD		SP101	1-505-607-11	SPEAKER (8cm)	
311	4-874-614-11	SCREW (4) (3.5X14), TAPPING		△ T501	1-431-353-11	TRANSFORMER, POWER	
312	X-3374-496-1	CORD ASSY					

## 7-8. SPEAKER (R) SECTION



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
351	X-3376-076-1	SPEAKER (FRONT) SUB ASSY		356	3-028-030-11	PANEL (R), REAR	
352	3-028-031-11	BOX, SPEAKER		357	4-874-614-11	SCREW (4) (3.5X14), TAPPING	
353	3-365-853-01	SCREW (+BTPWH) (3X12)		* 358	3-014-109-01	STOPPER, CORD	
354	3-028-028-01	DUCT (SPEAKER)		SP201	1-505-607-11	SPEAKER (8cm)	
355	1-782-509-11	CORD, SPEAKER					

## SECTION 8

### ELECTRICAL PARTS LIST

## NOTE:

• Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.

• -XX and -X mean standardized parts, so they may have some difference from the original one.

## • RESISTORS

All resistors are in ohms.

METAL: Metal-film resistor.

METAL OXIDE: Metal oxide-film resistor.

F: nonflammable

• Items marked "\*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

## • SEMICONDUCTORS

In each case, u: μ, for example:

uA.. : μA.. uPA.. : μPA..

uPB.. : μPB.. uPC.. : μPC.. uPD.. : μPD..

## • CAPACITORS

uF: μF

## • COILS

uH: μH

The components identified by mark △ or dotted line with mark. △ are critical for safety. Replace only with part number specified.

When indicating parts by reference number, please include the board.

## • Abbreviation

EE : East European model

IT : Italian model

SP : Singapore model

CET : East European, CIS model

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
*	1-671-065-11	AMPLIFIER BOARD	*****	C144	1-162-849-11	CERAMIC	0.068uF 10% 16V
			< CAPACITOR >	C145	1-162-849-11	CERAMIC	0.068uF 10% 16V
				C146	1-162-839-11	CERAMIC	0.01uF 10% 16V
				C147	1-126-960-11	ELECT	1uF 20% 50V
				C152	1-162-294-31	CERAMIC	0.001uF 10% 50V
C181	1-126-960-11	ELECT	1uF 20% 50V	C153	1-104-664-11	ELECT	47uF 20% 10V
C182	1-162-294-31	CERAMIC	0.001uF 10% 50V	C155	1-107-909-11	ELECT	47uF 20% 10V
C184	1-130-495-00	MYLAR	0.1uF 5% 50V	C156	1-162-282-31	CERAMIC	100PF 10% 50V
C185	1-130-495-00	MYLAR	0.1uF 5% 50V	C201	1-162-294-31	CERAMIC	0.001uF 10% 50V
C281	1-126-960-11	ELECT	1uF 20% 50V	C202	1-104-664-11	ELECT	47uF 20% 10V
C282	1-162-294-31	CERAMIC	0.001uF 10% 50V	C203	1-137-442-11	FILM	0.039uF 5% 50V
C382	1-104-665-11	ELECT	100uF 20% 10V	C204	1-162-302-11	CERAMIC	0.0022uF 20% 16V
C385	1-128-551-11	ELECT	22uF 20% 25V	C205	1-162-215-31	CERAMIC	47PF 5% 50V
C386	1-126-964-11	ELECT	10uF 20% 50V	C206	1-126-959-11	ELECT	0.47uF 20% 50V
			< IC >	C208	1-126-959-11	ELECT	0.47uF 20% 50V
IC309	8-759-333-16	IC LA4705NA		C210	1-162-282-31	CERAMIC	100PF 10% 50V
			< RESISTOR >	C212	1-126-964-11	ELECT	10uF 20% 50V
R181	1-249-429-11	CARBON	10K 5% 1/4W	C241	1-126-964-11	ELECT	10uF 20% 50V
R182	1-249-431-11	CARBON	15K 5% 1/4W	C242	1-162-294-31	CERAMIC	0.001uF 10% 50V
△R183	1-249-385-11	CARBON	2.2 5% 1/6W F	C243	1-126-964-11	ELECT	10uF 20% 50V
△R184	1-249-385-11	CARBON	2.2 5% 1/6W F	C244	1-162-849-11	CERAMIC	0.068uF 10% 16V
R281	1-249-429-11	CARBON	10K 5% 1/4W	C245	1-162-849-11	CERAMIC	0.068uF 10% 16V
R282	1-249-431-11	CARBON	15K 5% 1/4W	C246	1-162-839-11	CERAMIC	0.01uF 10% 16V
R381	1-249-425-11	CARBON	4.7K 5% 1/4W	C247	1-126-960-11	ELECT	1uF 20% 50V
R383	1-249-417-11	CARBON	1K 5% 1/4W	C252	1-162-294-31	CERAMIC	0.001uF 10% 50V
			*****	C253	1-104-664-11	ELECT	47uF 20% 10V
				C255	1-107-909-11	ELECT	47uF 20% 10V
				C256	1-162-282-31	CERAMIC	100PF 10% 50V
*	A-3321-480-A	AUDIO BOARD, COMPLETE	*****	C301	1-104-665-11	ELECT	100uF 20% 10V
				C302	1-126-925-11	ELECT	470uF 20% 10V
				C303	1-126-963-11	ELECT	4.7uF 20% 50V
				C304	1-104-665-11	ELECT	100uF 20% 10V
				C307	1-161-494-00	CERAMIC	0.022uF 25V
				C311	1-162-305-11	CERAMIC	0.0068uF 30% 16V
C101	1-162-294-31	CERAMIC	0.001uF 10% 50V	C312	1-104-664-11	ELECT	47uF 20% 10V
C102	1-104-664-11	ELECT	47uF 20% 10V	C313	1-137-350-11	MYLAR	0.015uF 10% 100V
C103	1-137-442-11	FILM	0.039uF 5% 50V	C314	1-162-294-31	CERAMIC	0.001uF 10% 50V
C104	1-162-302-11	CERAMIC	0.0022uF 20% 16V	C315	1-162-305-11	CERAMIC	0.0068uF 30% 16V
C105	1-162-215-31	CERAMIC	47PF 5% 50V	C316	1-162-302-11	CERAMIC	0.0022uF 20% 16V
C106	1-126-959-11	ELECT	0.47uF 20% 50V	C324	1-126-961-11	ELECT	2.2uF 20% 50V
C108	1-126-959-11	ELECT	0.47uF 20% 50V	C325	1-126-961-11	ELECT	2.2uF 20% 50V
C112	1-126-964-11	ELECT	10uF 20% 50V	C326	1-126-963-11	ELECT	4.7uF 20% 50V
C141	1-126-964-11	ELECT	10uF 20% 50V	C327	1-104-664-11	ELECT	47uF 20% 10V
C142	1-162-294-31	CERAMIC	0.001uF 10% 50V	C328	1-126-959-11	ELECT	0.47uF 20% 50V
C143	1-126-964-11	ELECT	10uF 20% 50V	C329	1-137-189-11	FILM	0.18uF 5% 50V

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark
C333	1-104-664-11	ELECT	47uF	20%	10V	D317	8-719-991-33	DIODE 1SS133T-77	
C334	1-126-963-11	ELECT	4.7uF	20%	50V	D318	8-719-991-33	DIODE 1SS133T-77	
C335	1-126-960-11	ELECT	1uF	20%	50V	D319	8-719-991-33	DIODE 1SS133T-77	
C336	1-126-961-11	ELECT	2.2uF	20%	50V	D320	8-719-991-33	DIODE 1SS133T-77	
C337	1-104-665-11	ELECT	100uF	20%	10V				< IC >
C338	1-161-494-00	CERAMIC	0.022uF		25V	IC301	8-759-264-71	IC TA2068N	
C339	1-161-494-00	CERAMIC	0.022uF		25V	IC302	8-759-432-41	IC BH3854AS	
C340	1-162-290-31	CERAMIC	470PF	10%	50V	IC303	8-759-701-54	IC NJM2073D	
C341	1-162-290-31	CERAMIC	470PF	10%	50V	IC305	8-759-905-47	IC BA338	
C342	1-162-290-31	CERAMIC	470PF	10%	50V				< JACK >
C344	1-162-282-31	CERAMIC	100PF	10%	50V	J302	1-770-612-12	JACK, PIN 2P (SIGNAL OUTPUT)	
C345	1-162-306-11	CERAMIC	0.01uF	20%	16V				< FERRITE BEAD >
C346	1-162-306-11	CERAMIC	0.01uF	20%	16V				
C347	1-104-664-11	ELECT	47uF	20%	10V				
C348	1-126-959-11	ELECT	0.47uF	20%	50V				
C350	1-162-306-11	CERAMIC	0.01uF	20%	16V	JW121	1-410-397-21	FERRITE BEAD INDUCTOR	1.1uH
C351	1-104-652-11	ELECT	470uF	20%	10V	L154	1-410-397-21	FERRITE BEAD INDUCTOR	1.1uH
C352	1-104-665-11	ELECT	100uF	20%	10V	L254	1-410-397-21	FERRITE BEAD INDUCTOR	1.1uH
C353	1-126-940-11	ELECT	330uF	20%	25V				< CONNECTOR >
C354	1-161-494-00	CERAMIC	0.022uF		25V				
C355	1-104-664-11	ELECT	47uF	20%	10V	* P301	1-564-187-00	PIN, CONNECTOR	
C356	1-161-494-00	CERAMIC	0.022uF		25V	* P302	1-564-187-00	PIN, CONNECTOR	
C357	1-104-665-11	ELECT	100uF	20%	10V				< TRANSISTOR >
C358	1-161-494-00	CERAMIC	0.022uF		25V				
C359	1-126-964-11	ELECT	10uF	20%	50V	Q102	8-729-900-74	TRANSISTOR DTC143TS	
C360	1-161-494-00	CERAMIC	0.022uF		25V	Q103	8-729-036-86	TRANSISTOR KTC3203Y-AT	
C361	1-161-494-00	CERAMIC	0.022uF		25V	Q131	8-729-900-74	TRANSISTOR DTC143TS	
						Q132	8-729-900-74	TRANSISTOR DTC143TS	
						Q202	8-729-900-74	TRANSISTOR DTC143TS	
									< CONNECTOR >
* CN301	1-564-710-11	PIN, CONNECTOR (SMALL TYPE) 8P				Q203	8-729-036-86	TRANSISTOR KTC3203Y-AT	
CN303	1-569-312-11	SOCKET, CONNECTOR (LARGE TYPE) 27P				Q231	8-729-900-74	TRANSISTOR DTC143TS	
* CNP301	1-779-536-11	PLUG, CONNECTOR 4P (POWER IN)				Q232	8-729-900-74	TRANSISTOR DTC143TS	
CNP302	1-564-707-11	PIN, CONNECTOR (SMALL TYPE) 5P				Q301	8-729-036-86	TRANSISTOR KTC3203Y-AT	
* CNP304	1-564-710-11	PIN, CONNECTOR (SMALL TYPE) 8P				Q302	8-729-036-86	TRANSISTOR KTC3203Y-AT	
CNP305	1-573-826-11	CONNECTOR, BOARD TO BOARD 12P							
* CNP306	1-564-708-11	PIN, CONNECTOR (SMALL TYPE) 6P				Q303	8-729-036-86	TRANSISTOR KTC3203Y-AT	
* CNP307	1-564-709-11	PIN, CONNECTOR (SMALL TYPE) 7P				Q304	8-729-422-57	TRANSISTOR UN4111	
						Q305	8-729-900-80	TRANSISTOR DTC114ES	
						Q306	8-729-900-80	TRANSISTOR DTC114ES	
						Q307	8-729-036-86	TRANSISTOR KTC3203Y-AT	
									< DIODE >
D301	8-719-991-33	DIODE 1SS133T-77				Q308	8-729-119-78	TRANSISTOR 2SC2785-HFE	
D302	8-719-991-33	DIODE 1SS133T-77				Q309	8-729-036-86	TRANSISTOR KTC3203Y-AT	
D304	8-719-991-33	DIODE 1SS133T-77				Q310	8-729-900-80	TRANSISTOR DTC114ES	
D305	8-719-991-33	DIODE 1SS133T-77				Q311	8-729-195-23	TRANSISTOR 2SA952	
D307	8-719-991-33	DIODE 1SS133T-77				Q312	8-729-900-80	TRANSISTOR DTC114ES	
D308	8-719-991-33	DIODE 1SS133T-77				Q313	8-729-119-76	TRANSISTOR 2SA1175-HFE	
D309	8-719-991-33	DIODE 1SS133T-77				Q314	8-729-900-80	TRANSISTOR DTC114ES	
D310	8-719-991-33	DIODE 1SS133T-77				Q315	8-729-209-15	TRANSISTOR 2SD2012	
D311	8-719-110-09	DIODE RD8.2ES-B3				Q316	8-729-119-76	TRANSISTOR 2SA1175-HFE	
D312	8-719-991-33	DIODE 1SS133T-77				Q317	8-729-900-80	TRANSISTOR DTC114ES	
D313	8-719-109-89	DIODE RD5.6ESB2				Q318	8-729-209-15	TRANSISTOR 2SD2012	
D314	8-719-991-33	DIODE 1SS133T-77				Q319	8-729-011-92	TRANSISTOR 2SC2001TP-K1K2	
D315	8-719-921-89	DIODE MTZJ-13C				Q320	8-729-195-23	TRANSISTOR 2SA952	
D316	8-719-991-33	DIODE 1SS133T-77				Q323	8-729-265-52	TRANSISTOR 2SC2655	

# AUDIO

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark				
Q324	8-729-422-57	TRANSISTOR	UN4111	R302	1-249-441-11	CARBON	100K				
Q325	8-729-119-78	TRANSISTOR	2SC2785-HFE	R303	1-249-429-11	CARBON	10K				
Q326	8-729-422-57	TRANSISTOR	UN4111	R304	1-249-429-11	CARBON	10K				
Q327	8-729-900-80	TRANSISTOR	DTC114ES	R305	1-249-421-11	CARBON	2.2K				
Q328	8-729-900-80	TRANSISTOR	DTC114ES	R306	1-249-429-11	CARBON	10K				
Q329	8-729-194-57	TRANSISTOR	2SC945-P	R307	1-247-807-11	CARBON	100				
Q330	8-729-194-57	TRANSISTOR	2SC945-P	R311	1-249-389-11	CARBON	4.7				
Q331	8-729-900-80	TRANSISTOR	DTC114ES	R312	1-249-439-11	CARBON	68K				
Q332	8-729-422-57	TRANSISTOR	UN4111	R313	1-249-389-11	CARBON	4.7				
Q333	8-729-422-57	TRANSISTOR	UN4111	R314	1-249-429-11	CARBON	10K				
Q334	8-729-119-76	TRANSISTOR	2SA1175-HFE	R315	1-249-429-11	CARBON	10K				
Q335	8-729-422-57	TRANSISTOR	UN4111	R316	1-249-425-11	CARBON	4.7K				
< RESISTOR >											
R101	1-249-431-11	CARBON	15K	5%	1/4W	R320	1-247-903-00	CARBON	1M	5%	1/4W
R102	1-249-404-00	CARBON	82	5%	1/4W	R323	1-249-425-11	CARBON	4.7K	5%	1/4W
R103	1-249-441-11	CARBON	100K	5%	1/4W	R324	1-249-417-11	CARBON	1K	5%	1/4W
R104	1-247-843-11	CARBON	3.3K	5%	1/4W	R325	1-249-417-11	CARBON	1K	5%	1/4W
R110	1-247-807-11	CARBON	100	5%	1/4W	R327	1-249-417-11	CARBON	1K	5%	1/4W
R111	1-247-887-00	CARBON	220K	5%	1/4W	R328	1-249-417-11	CARBON	1K	5%	1/4W
R112	1-249-437-11	CARBON	47K	5%	1/4W	R329	1-249-417-11	CARBON	1K	5%	1/4W
R114	1-249-417-11	CARBON	1K	5%	1/4W	R331	1-247-863-00	CARBON	22K	5%	1/4W
R115	1-249-417-11	CARBON	1K	5%	1/4W	R332	1-249-437-11	CARBON	47K	5%	1/4W
R116	1-249-437-11	CARBON	47K	5%	1/4W	R334	1-249-429-11	CARBON	10K	5%	1/4W
R127	1-249-437-11	CARBON	47K	5%	1/4W	R335	1-249-425-11	CARBON	4.7K	5%	1/4W
R140	1-249-425-11	CARBON	4.7K	5%	1/4W	R336	1-247-807-11	CARBON	100	5%	1/4W
R145	1-249-429-11	CARBON	10K	5%	1/4W	R337	1-249-437-11	CARBON	47K	5%	1/4W
R146	1-249-417-11	CARBON	1K	5%	1/4W	R338	1-249-417-11	CARBON	1K	5%	1/4W
R151	1-249-429-11	CARBON	10K	5%	1/4W	R339	1-249-417-11	CARBON	1K	5%	1/4W
R152	1-249-425-11	CARBON	4.7K	5%	1/4W	R340	1-249-417-11	CARBON	1K	5%	1/4W
R153	1-249-417-11	CARBON	1K	5%	1/4W	R342	1-249-425-11	CARBON	4.7K	5%	1/4W
R155	1-247-887-00	CARBON	220K	5%	1/4W	R343	1-249-429-11	CARBON	10K	5%	1/4W
R156	1-249-425-11	CARBON	4.7K	5%	1/4W	R344	1-249-429-11	CARBON	10K	5%	1/4W
R201	1-249-431-11	CARBON	15K	5%	1/4W	R345	1-249-441-11	CARBON	100K	5%	1/4W
R202	1-249-404-00	CARBON	82	5%	1/4W	R347	1-249-401-11	CARBON	47	5%	1/4W
R203	1-249-441-11	CARBON	100K	5%	1/4W	R349	1-249-435-11	CARBON	33K	5%	1/4W
R204	1-247-843-11	CARBON	3.3K	5%	1/4W	R351	1-249-401-11	CARBON	47	5%	1/4W
R210	1-247-807-11	CARBON	100	5%	1/4W	R352	1-249-428-11	CARBON	8.2K	5%	1/4W
R211	1-247-887-00	CARBON	220K	5%	1/4W	R353	1-249-417-11	CARBON	1K	5%	1/4W
R212	1-249-437-11	CARBON	47K	5%	1/4W	R355	1-247-885-00	CARBON	180K	5%	1/4W
R214	1-249-417-11	CARBON	1K	5%	1/4W	R356	1-249-437-11	CARBON	47K	5%	1/4W
R215	1-249-417-11	CARBON	1K	5%	1/4W	R357	1-249-421-11	CARBON	2.2K	5%	1/4W
R216	1-249-437-11	CARBON	47K	5%	1/4W	R360	1-249-441-11	CARBON	100K	5%	1/4W
R227	1-249-437-11	CARBON	47K	5%	1/4W	R361	1-247-815-00	CARBON	220	5%	1/4W
R240	1-249-425-11	CARBON	4.7K	5%	1/4W	R362	1-247-807-11	CARBON	100	5%	1/4W
R245	1-249-429-11	CARBON	10K	5%	1/4W	R363	1-249-441-11	CARBON	100K	5%	1/4W
R246	1-249-417-11	CARBON	1K	5%	1/4W	R364	1-249-413-11	CARBON	470	5%	1/4W
R251	1-249-429-11	CARBON	10K	5%	1/4W	R367	1-247-807-11	CARBON	100	5%	1/4W
R252	1-249-425-11	CARBON	4.7K	5%	1/4W	R368	1-249-413-11	CARBON	470	5%	1/4W
R253	1-249-417-11	CARBON	1K	5%	1/4W	R369	1-247-807-11	CARBON	100	5%	1/4W
R255	1-247-887-00	CARBON	220K	5%	1/4W	R370	1-249-441-11	CARBON	100K	5%	1/4W
R256	1-249-425-11	CARBON	4.7K	5%	1/4W	R371	1-249-421-11	CARBON	2.2K	5%	1/4W
R301	1-247-903-00	CARBON	1M	5%	1/4W						

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>			<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>											
R376	1-249-421-11	CARBON	2.2K	5%	1/4W	C752	1-162-201-31	CERAMIC	12PF	5%	50V									
R377	1-249-421-11	CARBON	2.2K	5%	1/4W	C753	1-162-203-31	CERAMIC	15PF	5%	50V									
R378	1-247-807-11	CARBON	100	5%	1/4W	C754	1-126-154-11	ELECT	47uF	20%	6.3V									
R379	1-247-815-00	CARBON	220	5%	1/4W	C755	1-162-306-11	CERAMIC	0.01uF	20%	16V									
< TRANSFORMER >																				
T301	1-429-820-11	TRANSFORMER, BIAS OSCILLATION	*****			C757	1-162-306-11	CERAMIC	0.01uF	20%	16V									
*****																				
*	A-3321-485-A	CD BOARD, COMPLETE	*****			C758	1-162-306-11	CERAMIC	0.01uF	20%	16V									
*****																				
< CAPACITOR >																				
C701	1-162-302-11	CERAMIC	0.0022uF	30%	16V	C763	1-162-600-11	CERAMIC	0.0047uF	30%	16V									
C702	1-136-165-00	FILM	0.1uF	5%	50V	C764	1-124-259-11	ELECT	4.7uF	20%	16V									
C703	1-136-165-00	FILM	0.1uF	5%	50V	C765	1-162-306-11	CERAMIC	0.01uF	20%	16V									
C704	1-136-165-00	FILM	0.1uF	5%	50V	C773	1-162-600-11	CERAMIC	0.0047uF	30%	16V									
C705	1-131-375-00	TANTALUM	4.7uF	10%	10V	C774	1-124-259-11	ELECT	4.7uF	20%	16V									
C706	1-136-159-00	FILM	0.033uF	5%	50V	C782	1-162-294-31	CERAMIC	0.001uF	10%	50V									
C707	1-136-156-00	FILM	0.018uF	5%	50V	C787	1-128-241-11	ELECT	220uF	20%	10V									
C708	1-162-199-31	CERAMIC	10PF	5%	50V	C788	1-162-306-11	CERAMIC	0.01uF	20%	16V									
C709	1-126-162-11	ELECT	3.3uF	20%	50V	C792	1-162-290-31	CERAMIC	470PF	10%	50V									
C710	1-136-495-11	FILM	0.068uF	5%	50V	C793	1-162-290-31	CERAMIC	470PF	10%	50V									
< CONNECTOR >																				
C711	1-162-215-31	CERAMIC	47PF	5%	50V	* CNP701	1-779-466-11	CONNECTOR, FFC/FPC 16P												
C712	1-162-306-11	CERAMIC	0.01uF	20%	16V	* CNP705	1-564-719-11	PIN, CONNECTOR (SMALL TYPE) 3P												
C713	1-136-159-00	FILM	0.033uF	5%	50V	CNP706	1-691-068-21	HOUSING, CONNECTOR 9P												
< IC >																				
C716	1-136-165-00	FILM	0.1uF	5%	50V	IC701	8-752-074-34	IC CXA1782BQ												
C717	1-104-664-11	ELECT	47uF	20%	10V	IC702	8-752-372-94	IC CXD2507AQ												
C718	1-126-964-11	ELECT	10uF	20%	50V	IC703	8-759-473-42	IC BA6898FP												
C721	1-130-491-00	MYLAR	0.047uF	5%	50V	IC704	8-759-364-34	IC SM5877AM												
C722	1-161-494-00	CERAMIC	0.022uF		25V	< FERRITE BEAD >														
C723	1-130-495-00	MYLAR	0.1uF	5%	50V	L701	1-410-397-21	FERRITE BEAD INDUCTOR	1.1uH											
C724	1-128-241-11	ELECT	220uF	20%	10V	L702	1-410-397-21	FERRITE BEAD INDUCTOR	1.1uH											
C725	1-162-199-31	CERAMIC	10PF	5%	50V	L752	1-410-324-11	INDUCTOR	4.7uH											
C726	1-162-294-31	CERAMIC	0.001uF	10%	50V	L760	1-410-397-21	FERRITE BEAD INDUCTOR	1.1uH											
C727	1-162-306-11	CERAMIC	0.01uF	20%	16V	L770	1-410-397-21	FERRITE BEAD INDUCTOR	1.1uH											
C728	1-162-306-11	CERAMIC	0.01uF	20%	16V	< TRANSISTOR >														
C729	1-126-154-11	ELECT	47uF	20%	6.3V	Q701	8-729-195-23	TRANSISTOR	2SA952											
C730	1-104-652-11	ELECT	470uF	20%	10V	Q703	8-729-900-74	TRANSISTOR	DTC143TS											
C731	1-162-305-11	CERAMIC	0.0068uF	30%	16V	< RESISTOR >														
C732	1-130-299-00	FILM	0.012uF	5%	50V	R700	1-249-429-11	CARBON	10K	5%	1/4W									
C734	1-162-305-11	CERAMIC	0.0068uF	30%	16V	R701	1-249-440-11	CARBON	82K	5%	1/4W									
C741	1-126-154-11	ELECT	47uF	20%	6.3V	R702	1-247-896-11	CARBON	510K	5%	1/4W									
C742	1-136-173-00	FILM	0.47uF	5%	50V	R703	1-249-441-11	CARBON	100K	5%	1/4W									
C743	1-162-290-31	CERAMIC	470PF	10%	50V	R704	1-247-883-00	CARBON	150K	5%	1/4W									
C744	1-162-286-21	CERAMIC	220PF	10%	50V	R705	1-249-437-11	CARBON	47K	5%	1/4W									
C745	1-136-169-00	FILM	0.22uF	5%	50V	R706	1-247-876-11	CARBON	75K	5%	1/4W									
C746	1-162-306-11	CERAMIC	0.01uF	20%	16V	R707	1-249-432-11	CARBON	18K	5%	1/4W									
C747	1-137-370-11	FILM	0.01uF	5%	50V															
C750	1-162-306-11	CERAMIC	0.01uF	20%	16V															
C751	1-162-306-11	CERAMIC	0.01uF	20%	16V															

Ref. No.	Part No.	Description		Remark	Ref. No.	Part No.	Description		Remark		
R708	1-247-883-00	CARBON	150K	5%	1/4W				< VIBRATOR >		
R709	1-247-862-11	CARBON	20K	5%	1/4W	X701	1-767-226-11	VIBRATOR, CRYSTAL (16.9344MHz)	*****		
R710	1-249-393-11	CARBON	10	5%	1/4W				*****		
R714	1-247-883-00	CARBON	150K	5%	1/4W				*****		
R715	1-249-430-11	CARBON	12K	5%	1/4W				*****		
R716	1-249-430-11	CARBON	12K	5%	1/4W				1-639-678-12 CD MOTOR BOARD		
R717	1-249-429-11	CARBON	10K	5%	1/4W				*****		
R718	1-247-899-11	CARBON	680K	5%	1/4W				< CONNECTOR >		
R720	1-247-891-00	CARBON	330K	5%	1/4W	CNP707	1-564-722-11	PIN, CONNECTOR (SMALL TYPE) 6P			
R722	1-249-439-11	CARBON	68K	5%	1/4W						
R723	1-249-440-11	CARBON	82K	5%	1/4W				< SWITCH >		
R725	1-249-437-11	CARBON	47K	5%	1/4W	S701	1-572-085-11	SWITCH, LEAF (LIMIT)	*****		
R726	1-249-429-11	CARBON	10K	5%	1/4W				*****		
R727	1-249-429-11	CARBON	10K	5%	1/4W				*****		
R730	1-249-435-11	CARBON	33K	5%	1/4W				*****		
R731	1-247-863-00	CARBON	22K	5%	1/4W	*	A-3321-484-A	CONTROL BOARD, COMPLETE (EXCEPT EE)			
R734	1-249-437-11	CARBON	47K	5%	1/4W	*	A-3321-490-A	CONTROL BOARD, COMPLETE (EE)	*****		
R735	1-249-429-11	CARBON	10K	5%	1/4W				*****		
R736	1-249-417-11	CARBON	1K	5%	1/4W	*	3-014-121-01	HOLDER (LCD)			
R740	1-247-843-11	CARBON	3.3K	5%	1/4W	*	3-014-130-01	SHEET, DIFFUSION			
							7-685-134-19	SCREW +P 2.6X8 TYPE2 NON-SLIT			
R741	1-249-417-11	CARBON	1K	5%	1/4W				< CAPACITOR >		
R742	1-249-429-11	CARBON	10K	5%	1/4W	C801	1-126-964-11	ELECT	10uF	20%	50V
R743	1-247-903-00	CARBON	1M	5%	1/4W	C802	1-104-905-11	DOUBLE LAYERS	0.22F		5.5V
R744	1-247-887-00	CARBON	220K	5%	1/4W	C803	1-104-664-11	ELECT	47uF	20%	10V
R745	1-249-429-11	CARBON	10K	5%	1/4W	C804	1-162-306-11	CERAMIC	0.01uF	20%	16V
R746	1-249-437-11	CARBON	47K	5%	1/4W	C805	1-104-665-11	ELECT	100uF	20%	10V
R748	1-249-429-11	CARBON	10K	5%	1/4W	C806	1-162-306-11	CERAMIC	0.01uF	20%	16V
R749	1-249-429-11	CARBON	10K	5%	1/4W	C807	1-102-516-11	CERAMIC	27PF	5%	50V
R750	1-249-413-11	CARBON	470	5%	1/4W	C808	1-102-516-11	CERAMIC	27PF	5%	50V
R751	1-247-807-11	CARBON	100	5%	1/4W	C809	1-161-494-00	CERAMIC	0.022uF		25V
R752	1-249-429-11	CARBON	10K	5%	1/4W	C810	1-126-964-11	ELECT	10uF	20%	50V
R753	1-249-429-11	CARBON	10K	5%	1/4W	C811	1-104-664-11	ELECT	47uF	20%	10V
R754	1-249-429-11	CARBON	10K	5%	1/4W	C813	1-162-306-11	CERAMIC	0.01uF	20%	16V
R756	1-249-440-11	CARBON	82K	5%	1/4W	C814	1-162-306-11	CERAMIC	0.01uF	20%	16V
R757	1-249-439-11	CARBON	68K	5%	1/4W	C815	1-162-306-11	CERAMIC	0.01uF	20%	16V
R758	1-249-439-11	CARBON	68K	5%	1/4W	C816	1-162-306-11	CERAMIC	0.01uF	20%	16V
R759	1-249-439-11	CARBON	68K	5%	1/4W	C817	1-102-518-11	CERAMIC	33PF	5%	50V
R760	1-249-417-11	CARBON	1K	5%	1/4W	C818	1-102-516-11	CERAMIC	27PF	5%	50V
R761	1-249-417-11	CARBON	1K	5%	1/4W	C819	1-102-516-11	CERAMIC	27PF	5%	50V
R762	1-249-417-11	CARBON	1K	5%	1/4W	C820	1-102-518-11	CERAMIC	33PF	5%	50V
R763	1-249-417-11	CARBON	1K	5%	1/4W	C821	1-162-306-11	CERAMIC	0.01uF	20%	16V
R764	1-249-417-11	CARBON	1K	5%	1/4W	C822	1-162-306-11	CERAMIC	0.01uF	20%	16V
R766	1-249-417-11	CARBON	1K	5%	1/4W	C823	1-162-282-31	CERAMIC	100PF	10%	50V
R776	1-249-417-11	CARBON	1K	5%	1/4W	C824	1-162-282-31	CERAMIC	100PF	10%	50V
R791	1-247-843-11	CARBON	3.3K	5%	1/4W	C825	1-162-282-31	CERAMIC	100PF	10%	50V
						C826	1-162-282-31	CERAMIC	100PF	10%	50V
						C827	1-162-282-31	CERAMIC	100PF	10%	50V
< VARIABLE RESISTOR >											
RV701	1-241-786-11	RES, ADJ, CARBON	22K			C829	1-162-282-31	CERAMIC	100PF	10%	50V
RV702	1-241-786-11	RES, ADJ, CARBON	22K			C830	1-162-282-31	CERAMIC	100PF	10%	50V
RV703	1-223-459-21	RES, ADJ, CERMET	2.2K			C831	1-162-282-31	CERAMIC	100PF	10%	50V
RV704	1-241-786-11	RES, ADJ, CARBON	22K			C832	1-162-282-31	CERAMIC	100PF	10%	50V

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark				
C833	1-162-282-31	CERAMIC	100PF	10%	50V	< CABLE HOLDER >							
C834	1-162-282-31	CERAMIC	100PF	10%	50V								
C835	1-162-282-31	CERAMIC	100PF	10%	50V				* KH805 1-573-287-11 HOLDER, CABLE 2P				
C836	1-162-282-31	CERAMIC	100PF	10%	50V	< COIL >							
C837	1-162-282-31	CERAMIC	100PF	10%	50V								
C838	1-162-282-31	CERAMIC	100PF	10%	50V	L801	1-408-117-00	INDUCTOR	10uH				
C839	1-162-306-11	CERAMIC	0.01uF	20%	16V	L802	1-412-832-11	INDUCTOR	1uH				
C841	1-162-306-11	CERAMIC	0.01uF	20%	16V	< LIQUID CRYSTAL DISPLAY >							
C842	1-162-306-11	CERAMIC	0.01uF	20%	16V								
C843	1-162-306-11	CERAMIC	0.01uF	20%	16V	LCD801	1-801-786-11	DISPLAY PANEL, LIQUID CRYSTAL					
C844	1-162-306-11	CERAMIC	0.01uF	20%	16V	< TRANSISTOR >							
C845	1-162-282-31	CERAMIC	100PF	10%	50V	Q801	8-729-194-57	TRANSISTOR	2SC945-P				
C846	1-162-306-11	CERAMIC	0.01uF	20%	16V	Q802	8-729-922-66	TRANSISTOR	2SC2410SN				
C847	1-162-306-11	CERAMIC	0.01uF	20%	16V	Q803	8-729-922-66	TRANSISTOR	2SC2410SN				
C848	1-162-306-11	CERAMIC	0.01uF	20%	16V	Q804	8-729-900-80	TRANSISTOR	DTC114ES				
C849	1-162-282-31	CERAMIC	100PF	10%	50V	Q805	8-729-195-23	TRANSISTOR	2SA952				
C850	1-162-282-31	CERAMIC	100PF	10%	50V	< RESISTOR >							
C851	1-162-282-31	CERAMIC	100PF	10%	50V	R801	1-249-417-11	CARBON	1K	5%	1/4W		
C852	1-162-306-11	CERAMIC	0.01uF	20%	16V	R802	1-249-417-11	CARBON	1K	5%	1/4W		
C853	1-162-282-31	CERAMIC	100PF	10%	50V	R803	1-249-417-11	CARBON	1K	5%	1/4W		
C854	1-162-282-31	CERAMIC	100PF	10%	50V	R804	1-249-417-11	CARBON	1K	5%	1/4W		
C855	1-162-282-31	CERAMIC	100PF	10%	50V	R805	1-249-417-11	CARBON	1K	5%	1/4W		
C856	1-162-282-31	CERAMIC	100PF	10%	50V								
C857	1-162-306-11	CERAMIC	0.01uF	20%	16V	R806	1-249-417-11	CARBON	1K	5%	1/4W		
C858	1-126-964-11	ELECT	10uF	20%	50V	R807	1-249-429-11	CARBON	10K	5%	1/4W		
C859	1-162-306-11	CERAMIC	0.01uF	20%	16V	R808	1-249-417-11	CARBON	1K	5%	1/4W		
C860	1-162-306-11	CERAMIC	0.01uF	20%	16V	R809	1-249-417-11	CARBON	1K	5%	1/4W		
C861	1-162-306-11	CERAMIC	0.01uF	20%	16V	R810	1-249-417-11	CARBON	1K	5%	1/4W		
C863	1-162-306-11	CERAMIC	0.01uF	20%	16V								
C866	1-126-964-11	ELECT	10uF	20%	50V	R811	1-249-417-11	CARBON	1K	5%	1/4W		
C867	1-162-306-11	CERAMIC	0.01uF	20%	16V	R812	1-249-429-11	CARBON	10K	5%	1/4W		
C868	1-162-306-11	CERAMIC	0.01uF	20%	16V	R813	1-249-429-11	CARBON	10K	5%	1/4W		
C869	1-162-306-11	CERAMIC	0.01uF	20%	16V	R814	1-249-429-11	CARBON	10K	5%	1/4W		
C901	1-104-664-11	ELECT	47uF	20%	10V	R815	1-249-417-11	CARBON	1K	5%	1/4W		
< CONNECTOR >													
CN801	1-774-493-11	CONNECTOR, FFC/FPC 27P				R816	1-249-429-11	CARBON	10K	5%	1/4W		
CNP802	1-770-389-11	PIN, CONNECTOR (PC BOARD) 5P				R818	1-249-417-11	CARBON	1K	5%	1/4W		
CNP803	1-770-387-11	PIN, CONNECTOR (PC BOARD) 3P				R819	1-249-417-11	CARBON	1K	5%	1/4W		
* CNP804	1-564-704-11	PIN, CONNECTOR (SMALL TYPE) 2P				R820	1-249-417-11	CARBON	1K	5%	1/4W		
CNP805	1-568-852-11	CONNECTOR, FFC/FPC 9P				R821	1-249-417-11	CARBON	1K	5%	1/4W		
< DIODE >													
D801	8-719-991-33	DIODE 1SS133T-77				R822	1-249-429-11	CARBON	10K	5%	1/4W		
D802	8-719-991-33	DIODE 1SS133T-77				R823	1-249-429-11	CARBON	10K	5%	1/4W		
D803	8-719-991-33	DIODE 1SS133T-77				R824	1-249-417-11	CARBON	1K	5%	1/4W		
D804	8-719-991-33	DIODE 1SS133T-77				R825	1-249-417-11	CARBON	1K	5%	1/4W		
D805	8-719-991-33	DIODE 1SS133T-77				R826	1-249-413-11	CARBON	470	5%	1/4W		
< IC >													
IC801	8-752-882-79	IC CXP83120A-022Q (EXCEPT EE)				R827	1-249-413-11	CARBON	470	5%	1/4W		
IC801	8-752-899-66	IC CXP83120A-031Q (EE)				R828	1-249-417-11	CARBON	1K	5%	1/4W		
IC802	8-759-449-53	IC S-81256PG-Z				R829	1-249-417-11	CARBON	1K	5%	1/4W		
IC803	8-759-511-42	IC S-80730AN				R830	1-249-429-11	CARBON	10K	5%	1/4W		
						R831	1-249-429-11	CARBON	10K	5%	1/4W		
						R832	1-249-425-11	CARBON	4.7K	5%	1/4W		
						R833	1-249-425-11	CARBON	4.7K	5%	1/4W		
						R834	1-249-429-11	CARBON	10K	5%	1/4W		
						R835	1-249-429-11	CARBON	10K	5%	1/4W		

<b>CONTROL</b>	<b>HEAD</b>	<b>HEADPHONE</b>	<b>JACK</b>
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Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R836	1-249-429-11	CARBON	10K 5% 1/4W	R918	1-249-417-11	CARBON	1K 5% 1/4W
R837	1-249-417-11	CARBON	1K 5% 1/4W	R919	1-249-417-11	CARBON	1K 5% 1/4W
R841	1-249-429-11	CARBON	10K 5% 1/4W	R920	1-249-417-11	CARBON	1K 5% 1/4W
R842	1-249-429-11	CARBON	10K 5% 1/4W	R921	1-249-417-11	CARBON	1K 5% 1/4W
R843	1-249-429-11	CARBON	10K 5% 1/4W	R922	1-249-417-11	CARBON	1K 5% 1/4W
R844	1-247-863-00	CARBON	22K 5% 1/4W	R923	1-249-417-11	CARBON	1K 5% 1/4W
R845	1-249-411-11	CARBON	330 5% 1/4W	R924	1-249-417-11	CARBON	1K 5% 1/4W
R846	1-249-429-11	CARBON	10K 5% 1/4W	R925	1-249-417-11	CARBON	1K 5% 1/4W
R847	1-249-417-11	CARBON	1K 5% 1/4W	R926	1-249-417-11	CARBON	1K 5% 1/4W
R848	1-249-417-11	CARBON	1K 5% 1/4W	R927	1-249-417-11	CARBON	1K 5% 1/4W
R849	1-249-417-11	CARBON	1K 5% 1/4W				< VIBRATOR >
R850	1-249-417-11	CARBON	1K 5% 1/4W	X801	1-760-105-11	VIBRATOR, CRYSTAL (32.768kHz)	
R851	1-249-417-11	CARBON	1K 5% 1/4W	X802	1-767-184-11	VIBRATOR, CERAMIC (4.19MHz)	
R852	1-249-417-11	CARBON	1K 5% 1/4W				*****
R853	1-249-417-11	CARBON	1K 5% 1/4W				
R854	1-249-437-11	CARBON	47K 5% 1/4W	*	1-662-743-11	HEAD BOARD	
R855	1-249-417-11	CARBON	1K 5% 1/4W				*****
R856	1-249-425-11	CARBON	4.7K 5% 1/4W				*****
R857	1-249-425-11	CARBON	4.7K 5% 1/4W				*****
R858	1-249-425-11	CARBON	4.7K 5% 1/4W	*	1-666-187-11	HEADPHONE BOARD	
							*****
R859	1-249-425-11	CARBON	4.7K 5% 1/4W				
R860	1-249-425-11	CARBON	4.7K 5% 1/4W				< CAPACITOR >
			(EE)				
R861	1-247-863-00	CARBON	22K 5% 1/4W	C154	1-162-294-31	CERAMIC	0.001uF 10% 50V
			(EE)	C254	1-162-294-31	CERAMIC	0.001uF 10% 50V
R866	1-249-441-11	CARBON	100K 5% 1/4W				< DIODE >
R867	1-249-417-11	CARBON	1K 5% 1/4W				
R868	1-249-441-11	CARBON	100K 5% 1/4W	D302	8-719-911-19	DIODE 1SS119	
R869	1-249-428-11	CARBON	8.2K 5% 1/4W				< JACK >
R872	1-249-429-11	CARBON	10K 5% 1/4W				
R873	1-249-437-11	CARBON	47K 5% 1/4W	J301	1-566-891-11	JACK (◎)	
R877	1-249-437-11	CARBON	47K 5% 1/4W				
R880	1-249-437-11	CARBON	47K 5% 1/4W				< CABLE HOLDER >
R881	1-249-437-11	CARBON	47K 5% 1/4W				
R882	1-249-425-11	CARBON	4.7K 5% 1/4W	*	KH302	1-565-386-11	HOLDER, CABLE 5P
R900	1-249-417-11	CARBON	1K 5% 1/4W				< FERRITE BEAD >
R901	1-249-417-11	CARBON	1K 5% 1/4W				
R902	1-249-417-11	CARBON	1K 5% 1/4W	L351	1-410-397-21	FERRITE BEAD INDUCTOR	1.1uH
R903	1-249-417-11	CARBON	1K 5% 1/4W				< RESISTOR >
R904	1-249-417-11	CARBON	1K 5% 1/4W				
R905	1-249-417-11	CARBON	1K 5% 1/4W	R151	1-247-807-11	CARBON	100 5% 1/4W
R906	1-249-417-11	CARBON	1K 5% 1/4W	R251	1-247-807-11	CARBON	100 5% 1/4W
R907	1-249-417-11	CARBON	1K 5% 1/4W				*****
R908	1-249-417-11	CARBON	1K 5% 1/4W				
R909	1-249-417-11	CARBON	1K 5% 1/4W	*	1-671-068-11	JACK BOARD	
R910	1-249-417-11	CARBON	1K 5% 1/4W				*****
R911	1-249-417-11	CARBON	1K 5% 1/4W				
R912	1-249-417-11	CARBON	1K 5% 1/4W				< CAPACITOR >
R913	1-249-417-11	CARBON	1K 5% 1/4W	C186	1-162-282-31	CERAMIC	100PF 10% 50V
R914	1-249-417-11	CARBON	1K 5% 1/4W	C286	1-162-282-31	CERAMIC	100PF 10% 50V
R915	1-249-417-11	CARBON	1K 5% 1/4W	C384	1-161-494-00	CERAMIC	0.022uF 25V
R916	1-249-417-11	CARBON	1K 5% 1/4W				
R917	1-249-417-11	CARBON	1K 5% 1/4W				

<b>JACK</b>	<b>LAMP</b>	<b>LINE</b>	<b>POWER</b>
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<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>			<u>Remark</u>		<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>			<u>Remark</u>								
< JACK >																				
* J501	1-537-405-11	TERMINAL BOARD (2P SP)			(SPEAKER OUT R-ch)		L111	1-412-503-11	INDUCTOR	22uH										
* J502	1-750-178-31	JACK, PIN 2P (SIGNAL INPUT)					L131	1-412-503-11	INDUCTOR	22uH										
< CABLE HOLDER >																				
* KH511	1-565-385-11	HOLDER, CABLE 4P					L211	1-412-503-11	INDUCTOR	22uH										
* KH513	1-573-287-11	HOLDER, CABLE 2P					L231	1-412-503-11	INDUCTOR	22uH										
*****																				
*	1-666-186-11	LAMP BOARD			*****		L301	1-410-397-21	FERRITE BEAD INDUCTOR	1.1uH										
< CABLE HOLDER >																				
* KH804	1-573-287-11	HOLDER, CABLE 2P					L311	1-412-503-11	INDUCTOR	22uH										
< PILOT LAMP >																				
PL801	1-517-474-21	LAMP, PILOT					L331	1-412-503-11	INDUCTOR	22uH										
PL802	1-517-474-21	LAMP, PILOT					< TRANSISTOR >													
*****																				
*	A-3321-474-A	LINE BOARD, COMPLETE			*****		Q101	8-729-900-74	TRANSISTOR	DTC143TS										
< CAPACITOR >							Q104	8-729-900-74	TRANSISTOR	DTC143TS										
C123	1-162-282-31	CERAMIC	100PF	10%	50V		Q201	8-729-900-74	TRANSISTOR	DTC143TS										
C125	1-126-964-11	ELECT	10uF	20%	50V		Q204	8-729-900-74	TRANSISTOR	DTC143TS										
C126	1-126-964-11	ELECT	10uF	20%	50V		< RESISTOR >													
C223	1-162-282-31	CERAMIC	100PF	10%	50V		R120	1-249-441-11	CARBON	100K	5%	1/4W								
C225	1-126-964-11	ELECT	10uF	20%	50V		R121	1-249-441-11	CARBON	100K	5%	1/4W								
C226	1-126-964-11	ELECT	10uF	20%	50V		R122	1-247-843-11	CARBON	3.3K	5%	1/4W								
C318	1-126-963-11	ELECT	4.7uF	20%	50V		R123	1-247-863-00	CARBON	22K	5%	1/4W								
C319	1-161-494-00	CERAMIC	0.022uF		25V		R124	1-249-421-11	CARBON	2.2K	5%	1/4W								
C320	1-104-665-11	ELECT	100uF	20%	10V		R125	1-249-421-11	CARBON	2.2K	5%	1/4W								
C321	1-104-664-11	ELECT	47uF	20%	10V		R220	1-249-441-11	CARBON	100K	5%	1/4W								
< DIODE >																				
D321	8-719-991-33	DIODE	1SS133T-77				R221	1-249-441-11	CARBON	100K	5%	1/4W								
D322	8-719-991-33	DIODE	1SS133T-77				R222	1-247-843-11	CARBON	3.3K	5%	1/4W								
< IC >																				
IC304	8-759-634-51	IC	M5218AP				R223	1-247-863-00	CARBON	22K	5%	1/4W								
J331	8-749-921-12	IC	GP1F32T (OPTICAL DIGITAL OUT (CD))				R224	1-249-421-11	CARBON	2.2K	5%	1/4W								
< JACK >																				
J323	1-566-822-21	JACK (LINE IN)					R225	1-249-421-11	CARBON	2.2K	5%	1/4W								
J332	1-566-822-21	JACK (LINE OUT)					R308	1-249-425-11	CARBON	4.7K	5%	1/4W								
< CABLE HOLDER >																				
* KH307	1-568-135-21	HOLDER, CABLE 7P					R309	1-249-426-11	CARBON	5.6K	5%	1/4W								
*****																				
* 1-671-064-11 POWER BOARD																				
*****																				
1-533-233-21 HOLDER, FUSE																				
< CAPACITOR >																				
C501 1-101-005-00 CERAMIC 0.022uF 50V																				
C502 1-136-169-00 FILM 0.22uF 5% 50V																				
C503 1-136-169-00 FILM 0.22uF 5% 50V																				
C504 1-101-005-00 CERAMIC 0.022uF 50V																				
C505 1-136-169-00 FILM 0.22uF 5% 50V																				
< CONNECTOR >																				
CNP501 1-564-321-00 PIN, CONNECTOR 2P																				
< DIODE >																				
D501 8-719-902-17 DIODE U15G																				
D502 8-719-902-17 DIODE U15G																				
D503 8-719-902-17 DIODE U15G																				
D504 8-719-902-17 DIODE U15G																				

**POWER**    **SW**    **SW (A)**    **SW (B)**

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark	
< FUSE >								
△F501	1-532-505-31	FUSE, TIME-LAG (T5A/250V)		R954	1-247-843-11	CARBON	3.3K 5% 1/4W	
< TRANSFORMER >								
△FL501	1-402-663-11	TRANSFORMER, LINE FILTER (LFT)		R955	1-249-427-11	CARBON	6.8K 5% 1/4W	
< CABLE HOLDER >								
* KH505	1-573-287-11	HOLDER, CABLE 2P		R956	1-249-415-11	CARBON	680 5% 1/4W	
*****								
*	1-662-742-11	SW BOARD		R957	1-249-416-11	CARBON	820 5% 1/4W	
*****								
< CONNECTOR >								
* CN691	1-564-725-11	PIN, CONNECTOR (SMALL TYPE) 9P		R958	1-249-418-11	CARBON	1.2K 5% 1/4W	
< PHOTO REFLECTOR >								
PH691	1-801-455-11	PHOTO REFLECTOR		R959	1-249-420-11	CARBON	1.8K 5% 1/4W	
< RESISTOR >								
R691	1-247-827-11	CARBON	680 5% 1/4W	R960	1-247-843-11	CARBON	3.3K 5% 1/4W	
< SWITCH >								
S691	1-762-811-11	SWITCH, LEAF (HALF (CASSETTE))		R961	1-249-427-11	CARBON	6.8K 5% 1/4W	
S694	1-762-811-11	SWITCH, LEAF (REC-REV (ERASE PROOF))		R962	1-249-415-11	CARBON	680 5% 1/4W	
S695	1-762-811-11	SWITCH, LEAF (REC-FWD (ERASE PROOF))		R963	1-249-416-11	CARBON	820 5% 1/4W	
S696	1-762-810-11	SWITCH, LEAF (MODE (HEAD POSITION))		R964	1-249-418-11	CARBON	1.2K 5% 1/4W	
*****								
*	1-666-184-11	SW (A) BOARD		R965	1-249-420-11	CARBON	1.8K 5% 1/4W	
*****								
< CAPACITOR >								
C902	1-162-282-31	CERAMIC	100PF 10% 50V	R966	1-247-843-11	CARBON	3.3K 5% 1/4W	
C903	1-161-494-00	CERAMIC	0.022uF	R967	1-249-427-11	CARBON	6.8K 5% 1/4W	
< CONNECTOR >								
CNP901	1-770-398-11	HOUSING, CONNECTOR (PC BOARD) 5P		R968	1-692-014-11	SWITCH, KEY BOARD (►►)		
CNP902	1-770-396-11	HOUSING, CONNECTOR (PC BOARD) 3P		R969	1-692-014-11	SWITCH, KEY BOARD (◀◀)		
< IC >								
IC901	8-759-471-49	IC NJL57H400A		R970	1-249-415-11	CARBON	680 5% 1/4W	
< CABLE HOLDER >								
* KH903	1-573-287-11	HOLDER, CABLE 2P		R971	1-249-416-11	CARBON	820 5% 1/4W	
< RESISTOR >								
R950	1-249-415-11	CARBON	680 5% 1/4W	R972	1-692-014-11	SWITCH, KEY BOARD (SOUND)		
R951	1-249-416-11	CARBON	820 5% 1/4W	R973	1-692-014-11	SWITCH, KEY BOARD (PGM SET/AUTO PRESET)		
R952	1-249-418-11	CARBON	1.2K 5% 1/4W	(PLAY MODE MONO/ST/ISS)				
R953	1-249-420-11	CARBON	1.8K 5% 1/4W	*****				

The components identified by mark △ or dotted line with mark. ▲ are critical for safety. Replace only with part number specified.

## **TERMINAL**

TUNER

Ref. No.	Part No.	Description			Remark	Ref. No.	Part No.	Description			Remark
*	1-671-066-11	TERMINAL BOARD	*****			C25	1-126-964-11	ELECT	10uF	20%	50V
		< CAPACITOR >				C26	1-162-288-31	CERAMIC	330PF	10%	50V
						C29	1-162-286-21	CERAMIC	220PF	10%	50V
						C30	1-162-290-31	CERAMIC	470PF	10%	50V
						C31	1-126-964-11	ELECT	10uF	20%	50V
C284	1-130-495-00	MYLAR	0.1uF	5%	50V	C32	1-162-294-31	CERAMIC	0.001uF	10%	50V
C285	1-130-495-00	MYLAR	0.1uF	5%	50V	C33	1-161-494-00	CERAMIC	0.022uF	25V	
C381	1-126-946-11	ELECT	6800uF	20%	25V	C40	1-102-518-11	CERAMIC	33PF	5%	50V
		< CONNECTOR >				C41	1-162-203-31	CERAMIC	15PF	5%	50V
* CNP503	1-506-946-11	PIN, CONNECTOR 4P				C42	1-162-306-11	CERAMIC	0.01uF	20%	16V
* CNP504	1-564-704-11	PIN, CONNECTOR (SMALL TYPE) 2P				C43	1-162-282-31	CERAMIC	100PF	10%	50V
* CNP505	1-564-704-11	PIN, CONNECTOR (SMALL TYPE) 2P				C44	1-162-306-11	CERAMIC	0.01uF	20%	16V
		< CABLE HOLDER >				C45	1-162-306-11	CERAMIC	0.01uF	20%	16V
* KH510	1-565-385-11	HOLDER, CABLE 4P				C46	1-162-306-11	CERAMIC	0.01uF	20%	16V
* KH512	1-573-287-11	HOLDER, CABLE 2P				C47	1-162-306-11	CERAMIC	0.01uF	20%	16V
		< FERRITE BEAD >				C48	1-162-294-31	CERAMIC	0.001uF	10%	50V
L501	1-410-397-21	FERRITE BEAD INDUCTOR	1.1uH			C49	1-162-294-31	CERAMIC	0.001uF	10%	50V
		< RESISTOR >				C50	1-162-294-31	CERAMIC	0.001uF	10%	50V
▲ R283	1-249-385-11	CARBON	2.2	5%	1/6W F	C51	1-162-306-11	CERAMIC	0.01uF	20%	16V
▲ R284	1-249-385-11	CARBON	2.2	5%	1/6W F	C52	1-126-964-11	ELECT	10uF	20%	50V
*****											
*	A-3321-478-A	TUNER BOARD, COMPLETE (EXCEPT IT,EE)				C53	1-162-306-11	CERAMIC	0.01uF	20%	16V
*	A-3321-479-A	TUNER BOARD, COMPLETE (IT)				C54	1-126-964-11	ELECT	10uF	20%	50V
*	A-3321-488-A	TUNER BOARD, COMPLETE (EE)				C55	1-136-177-00	FILM	1uF	5%	50V
		< CAPACITOR >				C56	1-162-306-11	CERAMIC	0.01uF	20%	16V
C1	1-162-306-11	CERAMIC	0.01uF	20%	16V	C60	1-161-772-11	CERAMIC	0.1uF	10%	25V
C2	1-162-294-31	CERAMIC	0.001uF	10%	50V	C61	1-162-291-31	CERAMIC	560PF	10%	50V
C3	1-162-306-11	CERAMIC	0.01uF	20%	16V	C62	1-162-207-31	CERAMIC	22PF	5%	50V
C4	1-130-483-00	MYLAR	0.01uF	5%	50V	C63	1-161-772-11	CERAMIC	0.1uF	10%	25V
C6	1-162-306-11	CERAMIC	0.01uF	20%	16V	C64	1-162-306-11	CERAMIC	0.01uF	20%	16V
C7	1-162-282-31	CERAMIC	100PF	10%	50V	C65	1-162-306-11	CERAMIC	0.01uF	20%	16V
C8	1-162-306-11	CERAMIC	0.01uF	20%	16V	C66	1-130-495-00	MYLAR	0.1uF	5%	50V
C9	1-162-306-11	CERAMIC	0.01uF	20%	16V	C69	1-161-494-00	CERAMIC	0.022uF	25V	
C10	1-162-306-11	CERAMIC	0.01uF	20%	16V	C70	1-136-356-11	FILM	470PF	5%	63V
C11	1-104-665-11	ELECT	100uF	20%	10V	C72	1-162-282-31	CERAMIC	100PF	10%	50V
C12	1-126-963-11	ELECT	4.7uF	20%	50V	C73	1-162-306-11	CERAMIC	0.01uF	20%	16V
C13	1-162-215-31	CERAMIC	47PF	5%	50V	C74	1-162-306-11	CERAMIC	0.01uF	20%	16V
C15	1-162-306-11	CERAMIC	0.01uF	20%	16V	C75	1-162-281-31	CERAMIC	91PF	10%	50V
C16	1-162-306-11	CERAMIC	0.01uF	20%	16V	C76	1-162-306-11	CERAMIC	0.01uF	20%	16V
C17	1-162-306-11	CERAMIC	0.01uF	20%	16V	C84	1-162-306-11	CERAMIC	0.01uF	20%	16V
C18	1-161-057-00	CERAMIC	0.033uF	10%	50V	C88	1-162-306-11	CERAMIC	0.01uF	20%	16V
C19	1-161-057-00	CERAMIC	0.033uF	10%	50V	C90	1-162-282-31	CERAMIC	100PF	10%	50V
C20	1-126-964-11	ELECT	10uF	20%	50V	C91	1-162-282-31	CERAMIC	100PF	10%	50V
C21	1-126-964-11	ELECT	10uF	20%	50V	C93	1-162-306-11	CERAMIC	0.01uF	20%	16V
C22	1-162-850-11	CERAMIC	0.082uF	10%	16V	C95	1-162-282-31	CERAMIC	100PF	10%	50V
C23	1-162-849-11	CERAMIC	0.068uF	10%	16V	C96	1-162-294-31	CERAMIC	0.001uF	10%	50V
C24	1-162-850-11	CERAMIC	0.082uF	10%	16V	C99	1-162-294-31	CERAMIC	0.001uF	10%	50V
								< FILTER >			
						CF1	1-767-557-11	FILTER, CERAMIC			
						CF2	1-767-557-11	FILTER, CERAMIC			
						CF3	1-767-557-11	FILTER, CERAMIC			
						CF4	1-767-096-11	VIBRATOR, CERAMIC			

The components identified by  
mark or dotted line with mark.  
 are critical for safety.  
Replace only with part number  
specified.

# TUNER

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>
< ENCAPSULATED COMPONENT >							
CFT1	1-239-173-11	ENCAPSULATED COMPONENT		R1	1-249-417-11	CARBON	1K
< CONNECTOR >							
CNP1	1-778-310-11	PLUG, CONNECTOR 2P (MW/LW)		R2	1-249-411-11	CARBON	330
CNP2	1-779-535-11	CONNECTOR, COAXIAL (EXT ANT FM)		R3	1-247-791-00	CARBON	22
CNP3	1-573-844-11	CONNECTOR, BOARD TO BOARD 12P		R10	1-249-403-11	CARBON	68
< TRIMMER >							
CT4	1-141-410-11	CAP, ADJ 10PF		R11	1-249-425-11	CARBON	4.7K
CT5	1-141-439-21	CAP, ADJ 40PF		R13	1-249-407-11	CARBON	150
< DIODE >							
D5	8-719-976-30	DIODE KV1560N		R14	1-249-437-11	CARBON	47K
D90	8-719-991-33	DIODE 1SS133T-77		R15	1-249-393-11	CARBON	10
D91	8-719-991-33	DIODE 1SS133T-77		R16	1-247-807-11	CARBON	100
D92	8-719-991-33	DIODE 1SS133T-77		R17	1-249-421-11	CARBON	2.2K
D93	8-719-991-33	DIODE 1SS133T-77		R18	1-249-393-11	CARBON	10
D94	8-719-991-33	DIODE 1SS133T-77		R19	1-247-863-00	CARBON	22K
D95	8-719-991-33	DIODE 1SS133T-77		R21	1-247-863-00	CARBON	22K
< IC >							
IC1	8-759-386-02	IC TA2008AN		R22	1-249-421-11	CARBON	2.2K
IC2	8-759-290-61	IC BU2615S		R23	1-249-421-11	CARBON	2.2K
< COIL >							
L3	1-416-248-11	COIL, MW RF		R25	1-249-425-11	CARBON	4.7K
L4	1-416-247-11	COIL (OSC)		R26	1-249-425-11	CARBON	4.7K
L5	1-416-249-11	COIL, LW RF		R27	1-249-425-11	CARBON	4.7K
L6	1-412-514-11	INDUCTOR 220uH		R28	1-249-425-11	CARBON	4.7K
L40	1-412-514-11	INDUCTOR 220uH		R29	1-249-421-11	CARBON	2.2K
< TRANSISTOR >							
Q1	8-729-905-50	TRANSISTOR DTC343TS		R30	1-249-441-11	CARBON	100K
Q2	8-729-905-50	TRANSISTOR DTC343TS		R40	1-249-429-11	CARBON	10K
Q3	8-729-922-66	TRANSISTOR 2SC2410SN		R41	1-249-429-11	CARBON	10K
Q4	8-729-922-66	TRANSISTOR 2SC2410SN		R42	1-249-429-11	CARBON	10K
Q5	8-729-178-62	TRANSISTOR 2SC2786-L		R43	1-249-429-11	CARBON	10K
Q6	8-729-119-32	FET 2SK193		R44	1-249-417-11	CARBON	1K
Q7	8-729-922-66	TRANSISTOR 2SC2410SN		R45	1-249-417-11	CARBON	1K
Q8	8-729-904-39	TRANSISTOR DTC114TS		R46	1-249-417-11	CARBON	1K
Q9	8-729-115-80	TRANSISTOR BA1A4P		R47	1-249-417-11	CARBON	1K
Q10	8-729-115-80	TRANSISTOR BA1A4P		R49	1-249-412-11	CARBON	390
Q11	8-729-115-80	TRANSISTOR BA1A4P		R50	1-249-415-11	CARBON	680
Q12	8-729-115-80	TRANSISTOR BA1A4P		R51	1-249-417-11	CARBON	1K
Q13	8-729-012-83	FET 2SK679A		R52	1-249-427-11	CARBON	6.8K
Q17	8-729-029-23	TRANSISTOR DTA114TSA-TP		R53	1-247-863-00	CARBON	22K
Q21	8-729-422-57	TRANSISTOR UN4111		R54	1-249-417-11	CARBON	1K
Q22	8-729-422-57	TRANSISTOR UN4111		R55	1-249-437-11	CARBON	47K
Q24	8-729-422-57	TRANSISTOR UN4111		R56	1-249-437-11	CARBON	47K
< RESISTOR >							
				R57	1-249-437-11	CARBON	47K
				R59	1-247-843-11	CARBON	3.3K
				R60	1-249-429-11	CARBON	10K
				R61	1-249-425-11	CARBON	4.7K
				R62	1-249-425-11	CARBON	4.7K
				R63	1-249-441-11	CARBON	100K
				R64	1-247-887-00	CARBON	220K
				R65	1-249-411-11	CARBON	330
				R66	1-249-413-11	CARBON	470
				R67	1-249-429-11	CARBON	10K
				R70	1-249-425-11	CARBON	4.7K
				R71	1-249-425-11	CARBON	4.7K
				R72	1-249-425-11	CARBON	4.7K
				R73	1-247-887-00	CARBON	220K

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>
R74	1-249-416-11	CARBON	820 5%	1/4W		ACCESSORIES & PACKING MATERIALS	
R76	1-249-441-11	CARBON	100K 5%	1/4W		*****	*****
			< ENCAPSULATED COMPONENT >				
T1	1-233-306-31	ENCAPSULATED COMPONENT				1-501-594-11 ANTENNA (FM)	
			< TUNER >			1-501-843-11 ANTENNA, LOOP (MW/LW)	
TU1	1-475-970-11	TUNER UNIT (EE)				1-590-478-11 CORD, CONNECTION (FOR AUDIO)	
* TU1	1-693-378-11	TUNER UNIT (EXCEPT EE)				3-860-142-11 MANUAL, INSTRUCTION (ENGLISH,GERMAN)	
			< VIBRATOR >			(AEP,UK,SP,EE)	
X1	1-760-130-11	VIBRATOR, CRYSTAL (75kHz)				3-860-142-21 MANUAL, INSTRUCTION (FRENCH,SPANISH)	
			*****			(AEP,SP)	
		MISCELLANEOUS	*****			3-860-142-31 MANUAL, INSTRUCTION (DUTCH,SWEDISH, PORTUGUESE) (AEP)	
			*****			3-860-142-41 MANUAL, INSTRUCTION (ITALIAN) (IT)	
3	1-782-296-11	WIRE, PARALLEL (FFC) (27 CORE)		*		3-860-142-81 MANUAL, INSTRUCTION (POLISH,CZECH, HUNGARIAN) (CET)	
102	1-782-294-11	WIRE, PARALLEL (FFC) (9 CORE)				3-860-142-91 MANUAL, INSTRUCTION (RUSSIAN) (EE)	
111	1-452-732-11	MAGNET				3-864-758-11 MANUAL, INSTRUCTION (SWEDISH,FINNISH)	
120	1-769-069-11	WIRE (FLAT TYPE) (16 CORE)				(CET)	
152	X-2626-202-2	CHASSIS ASSY (MB), MOTOR (SPINDLE)				*****	
		(INCLUDING M701)				HARDWARE LIST	
▲ 154	8-848-483-05	PICK-UP, OPTICAL KSS-213C/Q-RP				*****	
▲ 314	1-575-651-11	CORD, POWER (EXCEPT UK)			#1	7-685-647-79 SCREW +BVTP 3X10 TYPE2 N-S	
▲ 314	1-751-520-11	CORD, POWER (UK)			#2	7-685-247-19 SCREW +KTP 3X10 TYPE2 NON-SLIT	
319	1-782-509-11	CORD, SPEAKER (L-CH)			#3	7-685-134-19 SCREW +P 2.6X8 TYPE2 NON-SLIT	
355	1-782-509-11	CORD, SPEAKER (R-CH)			#4	7-685-136-19 SCREW +P 2.6X12 TYPE2 NON-SLIT	
△ F501	1-532-505-31	FUSE, TIME-LAG (T5A/250V)			#5	7-685-547-19 SCREW +BTP 3X10 TYPE2 N-S	
HRPE1011-500-480-11		HEAD, MAGNETIC (REC/PB/ERASE)			#6	7-685-851-04 SCREW +BVTT 2X4 (S)	
M691	3-016-425-01	MOTOR ASSY (CAPSTAN/REEL)			#7	7-685-533-19 SCREW +BTP 2.6X6 TYPE2 N-S	
M702	X-2625-769-1	GEAR ASSY (MB), MOTOR (SLED)			#8	7-621-255-15 SCREW +P 2X3	
PM691	1-454-806-11	SOLENOID, PLUNGER			#9	7-685-645-79 SCREW +P 3X6 TYPE2 NON-SLIT	
S801	1-692-960-11	SWITCH, PUSH (1 KEY) (OPEN/CLOSE)			#10	7-685-158-19 SCREW +P 4X6 TYPE2 NON-SLIT	
SP101	1-505-607-11	SPEAKER (8cm) (L-CH)			#11	7-682-554-09 SCREW +B 3X25	
SP201	1-505-607-11	SPEAKER (8cm) (R-CH)					
△ T501	1-431-353-11	TRANSFORMER, POWER					
		*****					

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mark ▲ or dotted line with mark.  
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